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PACIFIC SCHOOL OF RELIGION

SCIENCE & INDUSTRY

Journal of
**CALENDAR
REFORM**

DISCUSSION OF MONDAY HOLIDAYS



March 1953

V. 23-25
1953-56

THE WORLD CALENDAR

1ST
QUARTER

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

2ND
QUARTER

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

3RD
QUARTER

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
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15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

4TH
QUARTER

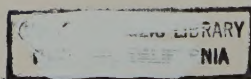
OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

Worldsday, (a World Holiday), W or 31 December (365th day), follows 30 December every year.

The Leapyear Day, (another World Holiday), W or 31 June follows 30 June in leap years.

In this Improved Calendar:

- Every year is the same.
- The quarters are equal: each quarter has exactly 91 days, 13 weeks or 3 months; the four quarters are identical in form.
- Each month has 26 weekdays, plus Sundays.
- Each year begins on Sunday, 1 January; each working year begins on Monday, 2 January.
- Each quarter begins on Sunday, ends on Saturday.
- The calendar is stabilized and perpetual, by ending the year with a 365th day that follows 30 December each year, called Worldsday dated "W" or 31 December, a year-end world holiday. Leap-year day is similarly added at the end of the second quarter, called Leapyear Day dated "W" or 31 June, another world holiday in leap years.



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ONE WORLD CALENDAR FOR ONE WORLD

VOL. XXIII

MARCH 1953

No. 1

BILLS are being introduced in 34 state legislatures to change the observance of several legal holidays, so that they will invariably fall on Mondays. The purpose is to provide long week-ends for recreation and travel, and at the same time alleviate a serious situation in business and industry—where “split weeks” cause absenteeism, financial loss and decreased productivity.

The proposed change would result in four regular Monday holidays. These would include: “Presidents Day” on the third Monday in February (combining the Washington and Lincoln birthday observances), Memorial Day on the last Monday in May, Independence Day on the first Monday in July, and Thanksgiving Day on the fourth Monday in November. The movement for these changes is under the leadership of the National Association of Travel Organizations, with other influential groups (notably labor, industry and education) supporting the plan.

Midweek holidays are admittedly a major nuisance and expense. Agitation against them has been growing in many countries since 1931, when their harmful effects were first emphasized by world-wide supporters of calendar reform. In the United States, economists say they cause an annual production loss of four to five billion dollars, because of starts and stops in the even flow of manufacturing and distribution.

The current movement for a partial correction of this situation has come about mainly through the persistent campaigning of calendar reformers. Business men, educators and thoughtful citizens everywhere have become convinced of the need for an improved and perpetual calendar. They have been disappointed and impatient over the apathy and delaying tactics of the Truman administration and the State Department, which in turn had its effect at the United Nations. Under the circumstances, Americans are taking matters into their own hands—seeking some measure of relief by way of their state legislatures. Such direct action in the general direction of calendar reform should arouse Washington to deal immediately with *the whole question*.

The movement for Monday holidays is an effective way for the American public to demonstrate dissatisfaction with the present calendar. Once the people are sufficiently

aroused concerning these four Monday holidays, it will be easy to demand a wider application. The two most important holidays in the year—Christmas and New Year's—can only be stabilized by adoption of The World Calendar.

At a hearing before the Vermont legislature, the Monday holiday bill was supported by a long list of speakers, including the president of the State Federation of Labor, the manager of the Fairbanks Morse Scale Company, the secretary of the Chamber of Commerce and the president of the Greater Vermont Association. The influential *Brattleboro Reformer* commented: "The same arguments recently advanced for a sensible World Calendar also support this measure, which would provide an interim improvement pending the more cumbersome business of securing world-wide agreement to basic calendar changes. . . . The long week-end is a necessary contributor to mental and physical health. With our present hodgepodge calendar, midweek holidays occur frequently and hardly serve the maximum recreational purpose."

In Connecticut, the editor of the *Waterbury Republican* is one of the supporters of the movement. "Our state legislature is working up steam in favor of the proposal," he declares. "Everyone groans when we have midweek holidays. However, legislative manipulation of holidays is only an approach to the problem. The surer way of meeting it is adoption of The World Calendar, already supported by many countries."

In Wisconsin, the *Milwaukee Journal* says: "The modest reform proposed to state legislatures provides for four Monday holidays. Since Labor Day is already on a Monday, this would leave only Christmas and New Year's unanchored to a week-end. That must await full calendar reform, making 25 December come on Monday every year. . . . Our reference to full calendar reform is not frivolous. It is a serious, organized movement of long standing and ineffable patience."

Of the 48 states, 42 are holding sessions of their legislatures this year. In 34 of the 42, bills for the Monday holiday plan have been presented or are ready for presentation. One state, Massachusetts, has rejected the proposal, but reconsideration is likely. Most of the bills contain a clause that the plan will go into effect as soon as it has been approved by two-thirds of the states.

It is recognized, of course, that the Monday holiday plan is a half-measure. While it stabilizes the weekdays, it leaves the month-dates vacillating, and in many ways the wandering month-dates will prove a considerable inconvenience. In the United States the summer seasonal period starts with Memorial Day and closes with Labor Day. Memorial Day on the last Monday in May will wander through a period from 25 May through 31 May; Labor Day will roam from the 1st through the 7th of September. The intervening period will sometimes be 14 weeks, sometimes 15. Similar difficulties will harass educators, owing to variations in the school-term period between Labor Day and Christmas. Retail trade will still be bothered by changes in the length of the shopping period between Thanksgiving Day and Christmas.

Obviously, the only way to resolve all these difficulties is to adopt The World Calendar. The awakened interest of the state legislatures must convince leaders in Washington that the time is here for them to do their part.

Journal of

CALENDAR REFORM

MARCH 1953

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Charles D. Morris, Editor

Linda Halsted, Associate Editor

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PROGRESS IS SLOW IN WORLD POLITICS

Editorial in Santa Barbara News-Press, 16 January 1953

FOR many years The World Calendar Association has been working, with an unlimited supply of determination and hope, to get all the people in the world to adopt one calendar and a simplified one at that. The Association has established headquarters and organizations in 36 nations. It publishes the quarterly *Journal of Calendar Reform*. The "reform" sought is a "world calendar" that was formally proposed at an international meeting 30 years ago.

It takes little thinking to see why the need for a "World Calendar" has increased every day for the past 30 years. Each day the affairs of all of us become more connected with the affairs of all the other people in the world.

A thought that is interesting, in connection with all this, is that one world-wide effort for a development which does not seem to threaten the power or selfishness of anyone connected with it may be doing much more for the "One World" idea than it appears to be doing. After all, a continuous, 30-year effort in 36 nations must have developed some feelings of common interest among these nations—even if the common interest is nothing more than agreeing on what day of the week it is.

However, in this world of disagreements, it is possible to have strong differences even about a simplified calendar for use throughout the world. Sir Harold Spencer Jones, Astronomer Royal of Great Britain, said in a recent lecture to the Royal Society:

"Some people have objected that The World Calendar breaks the continuity of the week, and that this is against divine ordinances. This objection does not seem to me to carry much weight in these days of rapid travel. A traveller crossing the date-line, in 180 degrees longitude, whether by sea or air, may miss out on Sunday, so that Saturday is followed by Monday, or may have two Saturdays or two Sundays in succession. It is thus quite impossible for everybody at all times to maintain the continuity of the week. We might recall, moreover, the words of Christ: 'The Sabbath was made for man and not man for the Sabbath.' "

So, we have 30 years of organized effort for world agreement about a comparatively simple matter—a matter that cannot change the military strength or the political trends of any country or people—and still we have enough disagreement on this subject to make "one calendar for all the world" a difficult matter.

With this example in front of us, we should be more charitable about the results accomplished by leaders that we charge with the responsibility of bringing about international agreements on more controversial affairs.

Meanwhile those who seek more world agreements on many things may use The World Calendar Association for example and inspiration. The workers in that Association show no signs of quitting. Their activities increase. Their official publication grows in influence. They continue to speak in terms of confidence and persuasion.

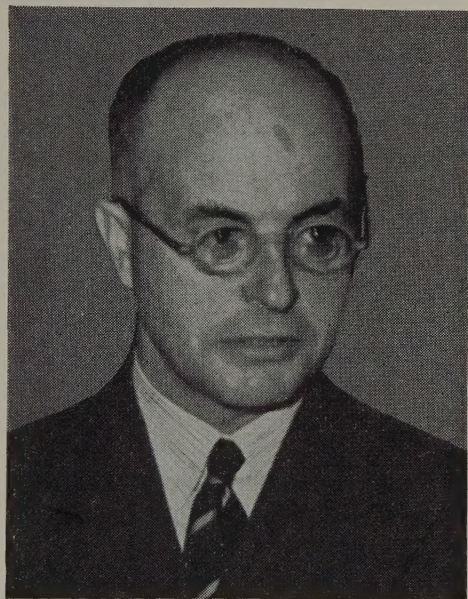
TOWARD ACTION IN HIGH PLACES

By Lord Merthyr

*Chairman of the British Section of The World Calendar Association
(An Address before the Royal Society of Arts, London, 17 December 1952)*

HOW tidy it would be to have every half-year and every quarter exactly alike! I know that in Great Britain, as I am constantly reminded, it is not popular to be tidy or logical. Therefore perhaps it will not do for me to stress this point too much. Seriously, though, will not business firms agree that to have the same number of working days in every month will be a benefit, and that to have only three different patterns of months instead of 28 cannot but be of advantage? Will not government departments welcome the disappearance of 53 Mondays in a year and the Inland Revenue the removal of 53 pay days? It will be so much easier to compute the dates of past events, and to memorize the whole calendar without having to buy every year an aide-memoire to clutter up one's desk. I do not know much about calendar-watches or clocks; but I have little doubt that they will be easier and cheaper to construct if the new calendar should be adopted.

I ought to say something about the *non dies* which, by being excluded from any week, enables us to secure all these advantages. This day would be a universal public holiday. It would probably be interposed after the last day of every year, between Saturday the 30th of December and Sunday the 1st of January. Likewise in leap years a second public holiday will



Lord Merthyr

be interposed between Saturday the 30th of June and Sunday the 1st of July. It is true that in England the end-of-the-year holiday will follow close upon the Christmas festivities; but it is an ill wind that blows no one any good, and our Scottish friends will be able to extend their end-of-year revelries by yet another day.

It might of course be preferred to have the new annual holiday every year on the 31st of June, which might be popular in the northern hemisphere. The extra leap-year holiday could then be at the end of

the year. These, however, are considerations of relatively minor importance, which would be decided by the majority vote of the United Nations. What really matters is that whatever is decided upon should be universally adopted.

Not only would the reformed calendar dispose of some unnecessary anomalies in our social contacts and affairs, but from a commercial point of view it would add greatly to the efficiency of industrial undertakings. Efficient production depends largely on available tools; and the calendar is a tool which every industry, from the greatest to the smallest, must use every day. No comprehensive survey has been carried out, so far as I am aware, of the benefits which might accrue to industry from this particular reform; but it is easy to imagine the added convenience which it would give to accountants and statisticians in facilitating comparison of periodic production figures; to the railways and insurance companies; to the banks; and to world-wide industrial undertakings which no doubt have to wrestle with calendar complications. Besides the existence of different calendars in various parts of the world, the statistical analysis of production by months, weeks or working-days, after allowing for the incidence of irregular holidays on wandering dates, is a mathematical proposition which has not only given perpetual worry to those whose duty it is to compute such figures, but has wasted incalculable time and money in producing them.

In the informative *Journal* dealing with this subject which is published quarterly in New York by The World Calendar Association, a writer recently claimed that, merely by adopting this reformed, stabilized and perpetual calendar the

United States would save enough to service its national debt. I find it a little difficult unreservedly to accept this claim: but I have no hesitation in agreeing that there must be a very high cost to be paid for broken working weeks due to the vagaries of our present calendar. However this may be, there is one interesting computation which was published in the same *Journal* recently, and which was based on official national statistics. This estimated the loss in wages in the United States in 1952 due solely to the incidence of calendar irregularities at 461 million dollars, which is a large sum.

I should like to say a further word about the railways, the activities of which have to be fitted into the calendar scheme, and to which the even distribution of time-schedules is perhaps more important than to any other industry. I should say that any railway official would agree about the complexity of the problems set up by a wandering Easter and Whitsun. In some financial years there are two Easters, in others there is one, in some there are none. The same applies in greater or lesser degree not only to every holiday, such as Christmas, which never now falls on the same day of the week in two consecutive years, but also to the carrying of freight of all kinds, the delivery of which is often determined by periodic contracts which vary in their intervals merely because of the dissimilarity in the lengths of the months. It is interesting to realize that as many as 30 years ago railway executives expressed themselves on the subject. In response to a questionnaire addressed to the various companies by the London Chamber of Commerce, I think in 1921, the replies were overwhelmingly in favor of reform of the calendar. I might mention

here, that the London Chamber of Commerce has been actively in favor of reform since 1911, when it passed a resolution urging the Government to give its attention to this problem.

The added convenience which banks and financial houses generally may expect from a reformed and regular calendar are so obvious that I mention them with reluctance. However, I will touch on one point in this connection—the ending of the years, half-years and quarters at the week-end—not just occasionally as now, but always. It is patent that the Saturday, followed by the Sunday, provides the best rounding-off moment for quarterly accounts, all the more because under The World Calendar each quarter would be exactly comparable with every other quarter, having 91 days made up of three months, each with 26 weekdays. I imagine that a bank's interest-tables, or ready-reckoning system for charging interest on our overdrafts, would be vastly simplified. And naturally this applies to mortgages and financial operations of all kinds.

So much for industry and the world of finance. I think I should try to show that adoption of The World Calendar would be no less advantageous in more aesthetic fields, for example in education and in science. I hesitate before an audience so distinguished to touch on the impact of such a reform on scientific research, but I will with respect submit that time measurement in its broader aspects—in between microseconds and light-years, let us say—is important; and that the adoption of The World Calendar in the scientific field would not be entirely incomparable with that other great reform which took place a century or so ago—the almost universal institution of the metric system of

measurement. What a brake the lack of that method might have put on the wheels of scientific progress!

Then in the world of education: in so many aspects of school life—from the University down to the local infant's class—the working out of term periods and holidays, as well as the timing of examinations, is quite unnecessarily complicated. The fact that under government regulations a minimum number of days of attendance must be completed in each term, for example, while the ends of terms must somehow be made to fit into the traditional holidays, leads to many strange anomalies, such as a term beginning on a Thursday or Friday, and being followed by two days without classes, including a Sunday, before the students have had time to settle in. In the future, school terms could always begin and end on the same days of the year. These difficulties could be avoided under any perpetual calendar, and I submit that with the proposed World Calendar the whole educational set-up would run more smoothly. The equal quarterly divisions might well lead to a minor educational revolution, since they would encourage a complete rearrangement of the system—I have no doubt for the better.

I should be foolish if I tried to hide the fact that there are objections to The World Calendar. One reason for the reluctance to adopt it is no doubt mere apathy, which many reformers have found the most difficult obstacle to overcome. There will I suppose be thousands who will oppose this change, as they oppose all changes, merely because it is a change. There are also, however, objections which carry weight, which are put forward by authoritative sources, which deserve anal-

ysis and invite argument, pro and con.

The most serious objection is religious. I must speak with care in dealing with this matter, but it is one which must be faced, and which cannot be ignored. I will try to deal with it objectively, and I hope I shall be believed when I say that I have proper respect for the religious beliefs of others, and that I am a strong believer in religious toleration. It must unfortunately be said, however, that we put up with much unnecessary inconvenience, such as for example the wandering date of Easter and Whitsun holidays, on account of religious objections. (Let me remind you that it is possible to reform the calendar without fixing Easter; just as it is possible to fix Easter without reforming the calendar.) The reason for the religious objection is simply that once in ordinary years, and twice in leap years, more than six days would intervene between two Sabbath days. So far as I am aware, however, objections on this account are confined to two religious bodies only: the Orthodox Jews and the Seventh Day Adventists, both of whom object on principle to the additional day once a year. I must express my opinion, and forecast that the progress of the world will not indefinitely be allowed to remain in this respect static merely on account of these religious objections. It will, of course, be quite possible for Jews to have the Sabbath on any day they choose, just as now they do not have it on the same day as do Christians. Also, since the *non dies* will be a holiday, it will be unnecessary for any more work to be done on it than is now done on Sundays.

In answer to this objection there is however, it seems to me, one argument which clinches the matter. What happens when a

world traveller arrives at the international date line? If he crosses it, it does not matter whether from East to West or West to East, he must either have eight days in a week or six; or he may arrive at the line on a Sunday, in which case he must either have two consecutive Sundays or none at all. This seems to me to be a devastating reply to those who say that there can never be more than six days between Sabbaths. In reality of course this difficulty, which is no new one, is got over; and in the same way fresh difficulties which a reformed calendar may create will likewise be got over. So far as I know, neither Jews nor Seventh Day Adventists refuse to cross the date line for religious or any other reasons.

I am uncertain about the attitude of the Roman Catholic Church. A short while ago I suggested that the date of Easter should for everybody's benefit be fixed. (It is not always appreciated that our own Parliament passed an Act to do this, subject to religious agreement, in 1928.) I was confronted with the difficulty of obtaining the consent of all the religious bodies, each of which said, broadly speaking, that they would agree if all the others did; but I found it apparently impossible to get the consent of the authorities in Rome. The question could only be decided by a General Ecumenical Council. I naturally said, "Let us therefore ask the General Council." But I was told: "It has not met since 1870 and the next meeting has not been arranged." With the greatest respect, this does not seem to me an efficient way of doing business. I may perhaps mention that when calendar reform was debated in the House of Lords in 1936 it was strongly supported by the then Archbishop of Canterbury.

I shall of course be told of many other objections, real and supposed. It will be said that I am destroying variety, which is the spice of life, and removing interesting anomalies without which existence would be drab and commonplace. To which my answer is, "If variety and anomalies are in themselves good, why not create more?" Why not for example have a different number of months in each year? How exciting it would be if annually we settled how many weeks or days we should have next year? These nursery rhymes are all very well; but behind them lies in reality a mass of inefficiency, waste, impoverishment and annoyance which is only tolerated because it is always with us.

Then there is the complaint that people will lose their birthdays. George Washington, I believe, had to have two birthdays in the years after the calendar was last changed. This objection I could claim not to take seriously, but for the surprising number of times it is put forward. What about people who now have birthdays on the 29th of February? There must be thousands of them, and they seem to get along in a quiet sort of way. I shall be told that this would create an upheaval of a disrupting nature, an historical break with long-established tradition; but are there not many other things which are crying out for reform, and some which have obtained it, which are also a break with tradition? Are we to refuse to abolish slums or slavery, the drug-traffic, or war itself, merely because they are established by a long tradition? There are also possible legal objections. All these could be got over, however, by inserting a section in the Act of Parliament, making it clear that the days of the new calendar will have the same legal validity as the corresponding

days of the old. In fact, a comparative table could be incorporated as a schedule in the Act of Parliament itself. I believe this was done in 1752.

There will, in fact, be surprisingly little dislocation caused by the changeover. A year will be chosen—I say will, because I am convinced that this thing is going to happen—in which according to the present calendar the first of January falls on a Sunday. This happens in 1956 and in 1961. Every time it happens hope is renewed that the next opportunity will be taken to effect the change. Ample notice must and will be given; at least two or three years' notice in my opinion is necessary; since many publications, such as for example the *Nautical Almanac*, have to be prepared many years ahead of that in which they are used. When the time comes and the new calendars and almanacs have been printed in their permanent form, the actual change will hardly be felt. The first thing that many people will know about it is when they date a letter, in whatever year it may be, on the 30th February. (For comparative purposes, by the way, it will be easy for everyone to have at his elbow a table showing the days of the new calendar which correspond to those of the old.)

How shall this change be brought about? I concede at once that it is no case for unilateral action by our own or any other government. Obviously it is desirable that there shall first be action by the United Nations or some international body, followed by ratification by at least the principal countries of the civilized world. The first thing, however, is to get some government to place the matter on the agenda of the United Nations. So far all efforts to get our own government to

do this—and I speak of course from an entirely non-party standpoint—have signally failed. They will not even put it on the agenda, which I must say is deplorable. I know the official answer only too well. It is that there is no evidence of public demand. I should have thought that it was the function of the Government to govern; but the attitude seems to be that nothing can be done until the mob is at the door, which, translated into official language, is rendered, "We have no mandate from the people." But are there no bills at present in Parliament upon which the electorate have not been consulted at all? And I wonder what popular mandate there was for the Daylight Saving Act, during the First World War? Some of the speeches in *Hansard* on the debate on that Bill are worthy of study as a method of showing just how wrong some of our legislators can be, and just how dangerous it is to prophesy dire results for a change just because it is a change.

If our Government will not support this change may we not at least ask that it will not oppose it, and not prevent it from being discussed by the only body which can usefully do so? One thing that is certain is that when this reform has been in operation for a few years people will say: "Why didn't we have this before?" Amongst those who will say this are many in Eastern and Asiatic countries which now have more than one calendar in the same national territory. India has fourteen. And does not the Eastern Orthodox Church still persistently adhere to the Julian calendar, thus enabling a lucky traveller to enjoy two Christmas and two Easter festivals in one year?

It is indeed appropriate that in the year 1952 attention has been focussed on the

calendar, a facility which is in such constant use that we take it for granted, and do not pause to consider whether it could be of even greater assistance than it is.

It is just 200 years since the Julian calendar gave way in Britain to the present Gregorian calendar, a change which was not made without much opposition. The cry "Give us back our eleven days" is not yet forgotten; and it is on record that some people seriously thought that they were losing eleven days of their lives. Even this reform was not made in this country for 170 years after it had been adopted on the continent; and it was not until after the First World War that some Eastern European countries accepted the Gregorian calendar. It is indeed strange that there should be such reluctance to accept reforms of this nature. It will be remembered what weird arguments were put forward, even by Members of Parliament, when Summer Time was introduced into this country in 1916—arguments such as that cows would not give milk, and so forth. Indeed a few diehards refused for many years to alter their clocks to conform to the new time.

I was one of those who last October had the privilege of hearing a lecture delivered by the Astronomer Royal in which he dealt very fully with the history of the calendar. May I say how interesting and instructive I found that lecture to be; for without a knowledge of the beginnings of the calendar and of past attempts to improve it—without the historical background—it is difficult properly to plan any future reform. The great majority of us have never considered the magnitude of the difficulties which the early calendar makers had to face. He explained very lucidly the defects of the old calendars

and the many attempts, some clumsy, some wise, to improve upon this instrument which is so useful in our everyday lives.

Remembering that the idea of reform is no new one, it is interesting to study the multitude of proposals which have from time to time been made. Not less than 152 different suggestions were examined by the League of Nations. Some of these were both ingenious and drastic. They included, to mention only a few, a year containing 73 5-day weeks, with every fifth day a holiday; a year of 20 months, each of three 6-day weeks, with leap-weeks of seven days five times a year; a year of 12 30-day months divided into five 6-day weeks. After an exhaustive sifting the League reduced these proposals to two, namely, a reformed 13-month calendar, and one particular reformed 12-month calendar, which has been called *The World Calendar*; and I shall so refer to it today.

It seems to me that this work will never be wasted, because we can now start where the League left off, having decided that two proposals only are worthy of serious consideration. In saying this I do not wish to criticize unfairly the many others which have been put forward; but I sincerely believe that none of these approaches in usefulness the two selected by the League. Before passing from them I will mention only one other which is being now discussed as a rival to *The World Calendar*, namely, the Edwards calendar, which so far as I know differs only in that the weeks begin on Mondays instead of on Sundays.

Let me next deal briefly with the proposed calendar of 13 28-day months, which was put forward some years ago by the International Fixed Calendar League, headed by a Canadian accountant from Yorkshire, Mr. Moses Cotsworth. I admit

at once that, although I am a strong supporter of *The World Calendar*, I have always been attracted by the 13-month plan, its great merit being that every month has an equal number of days, and that is a very great merit. However, I am satisfied that there would be even more opposition to this than to the 12-month fixed calendar. The principal defect of the 13-month plan is that the half-years and quarters, except at the beginning of the year, do not begin on the first day of a month. (Our present quarter-days, of course, do not either.) There are also I understand superstitious objections, but to these I pay no attention. The reformed 12-month or *World Calendar* therefore is the one above all others for which to my mind we all ought to strive. Since, however, by common consent this question must be decided by some international body, that body could and should review once again and finally all the suggestions which have been made.

The *World Calendar Association*, of New York, is the sponsor of the 12-month reformed plan, and I should like to pay tribute to it, and in particular to its President, Miss Elisabeth Achelis, who is literally devoting her life to this reform, which I am convinced will one day be adopted. I hope that her name will always be associated with it. She is nobly carrying on her campaign against the innate and deep-rooted conservatism which permeates our world and clogs the wheels of progress.

Let me outline some of the disadvantages of the present calendar. The fact that it is impossible to have an exact number of weeks in the year necessitates that, so long as we never have more or less than seven days in the week, the months must begin on seven different weekdays. In

other words, the first day of the month is a wandering event. This of itself creates innumerable difficulties, to which we have become so accustomed that we put up with them without considering whether they could be avoided. May I somewhat daringly give an example from my own experience? I have regularly a meeting on the second Tuesday of every month. The organization in question for its own convenience also meets on the preceding day, which is usually the second Monday of the month. It sometimes happens, however, that the day before the second Tuesday is not the second Monday, but the first, in which case it clashes with another meeting on the first Monday of every month. In 1952 this happened three times. This little example you may consider to be as trivial as it is personal; but I can assure you that in my own case alone it can be multiplied many times, and that not a month passes without this causing me noticeable inconvenience, which irritates all the more because I know that it is unnecessary.

It is not always realized that in our present calendar the two half-years are unequal, containing 181 and 184 days respectively. (No one seems to complain that he has to work for three days longer for the same salary in the second half-year.) Not even the quarters are of equal length, varying as they do from 90 days to 92 days. Everyone does know, however, that the calendar months have different lengths, and begin on every one of the seven days of the week. I have never been suitably impressed by the thought that August has 31 days and February only 28 entirely because the birthday of Augustus Caesar was in the former month. (I wonder just how much trouble the vanity of this potentate has caused to the world.) We

have now in fact at least 28 different patterns of a month.

The number of working days varies from 24 to 27, which is an inconvenience alike to employers and employed, and which, as I shall show, is quite unnecessary. Under the new plan the number of weekdays in a month will invariably be 26. This is achieved by always having five Sundays in 31-day months, and four in 30-day months. Another difficulty, but one which admittedly would not be entirely relieved by The World Calendar, but which would be removed if we had 13 months, is that there are now sometimes five market or shopping days, Fridays or Saturdays, in a month, on which the housewife buys her supplies, whereas in other months there are only four. She finds, however, that her husband's salary, if he is paid monthly, is not increased when there are five market days as against the usual four. Again, in some years we now have 53 Mondays upon which insurance cards have to be stamped, in most years only 52. In some years there are 53 weekly pay days, which introduces unnecessary complications to P.A.Y.E. (Pay as you earn, a form of pay-roll tax deduction.)

Those interested in the dating of historical events find it difficult to work out upon which day of the week well-known incidents actually happened. It is troublesome, is it not, to have bank and public holidays occurring on different dates of the month, as does August Bank Holiday; or on different days of the week, as does Christmas Day. Have you ever thought of the inconvenience which can be caused by Christmas Day falling on, say, a Thursday, as it does in 1952, as compared with on a Monday, which is thought by most people, though perhaps not by all, to be

the most convenient day upon which to have it? (In the Reformed Calendar it will always be on a Monday.) It cannot be good for industry and commerce to have a two-day Christmas holiday in the middle of a week, and then, after one or one and a half working days, to have another holiday at the week-end. But this is what we shall do in 1952, when those who work on Saturdays will have their Christmas holiday split into two.

Then again, what a waste it is to have to buy a new calendar and a new diary every year. I know that I am treading on somebody's toes in saying this; but what a saving there would be if we all knew the calendar by heart, and never needed to look at it on paper. I know that you are longing to tell me that I will put calendar makers out of employment, but I regard their work as being almost completely unproductive, and it would be interesting to know how many tons of paper are annually wasted in making unwanted calendars. They might instead produce permanent calendars, more artistic than the present flimsy ones designed only to be thrown away. To sum up this list, which is by no means exhaustive, of the disadvantages of our present calendar I might mention the painful necessity which some people have of learning nursery rhymes before they can date a letter.

What then is this magic change which would substitute ease for inconvenience? It is really very simple. I have already mentioned that the root of all our troubles is that in our solar year there is not an exact number of weeks; in other words that 365 is not exactly divisible by seven. It is divisible by no number except 5, and there are many objections to 5-day weeks.

The World Calendar takes this difficulty in its stride, and excludes from the week, though not from the month or from the year, one day in ordinary years and in leap years two days. Thereafter the first day of every year, of every half-year and of every quarter will fall on a Sunday. Likewise in every quarter the first day of the first month will always be a Sunday; the first day of the second month will be a Wednesday; the first day of the third month will be a Friday. Observe how the difficulty of the clashing of engagements at once disappears. Reverting to my own personal troubles, the day preceding the second Tuesday of the month will never fall on the first Monday of that month; the meetings which I have on those days will never collide or overlap, my excuse for not going to the meetings will disappear, and I shall have to think of some other pretext for being lazy.

Calendar reformers in this country are not speaking with an entirely lone voice. In many countries the desire for reform is being urgently stated. Since the League of Nations brought the subject to the world's notice, no fewer than 17 nations, professing several different religions, have indicated their readiness to adopt The World Calendar, including several Roman Catholic countries and three which adhere to the Muslim faith, or at least have large Muslim populations. The difficulty is that none of the so-called Great Powers has raised its voice in its favor. There is a strong movement working for the reform in France and also in Canada and India, as well as associations in many other countries. What the cause lacks is one loud united voice which will provoke action in high places.

STATE OF MONTANA MAKES A TEST

By Dr. James L. C. Ford

Dean of Journalism, Montana State University

NOW is the time for action toward international adoption of The World Calendar on the first day of 1956, the date when both old and new calendars coincide. How can we, as individuals, help to get such approval? One of the ways, much used and long favored in a democracy, is to write our own chosen representatives and enlist their cooperation.

That's what the writer of this article did. He was surprised and gratified at the response. It indicated that calendar reform was certain to win if all citizens interested in The World Calendar would do likewise.

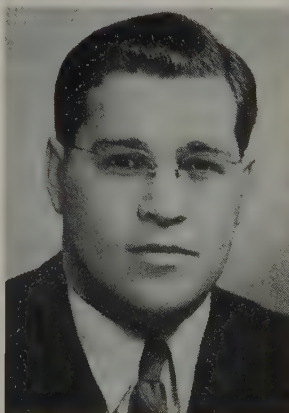
Following the November election, when Montana, my home state, sent a new senator and new representative to join incumbent U. S. Senator James E. Murray and re-elected Representative Wesley A. D'Ewart, I used the U. S. mail to urge their backing for The World Calendar. Both to Senator Murray and Representative D'Ewart as well as to Senator Mike Mansfield and Representative Lee Metcalf, I sent a leaflet describing the advantages of The World Calendar and a personal letter, similar to the following:

A sane and sensible calendar system would immensely benefit American business, education, and society generally. Our present antiquated calendar is outmoded and out of date. I enclose a proposal for The World Calendar which has received favorable attention from many nations officially as well as from professional, industrial, and scientific organizations.

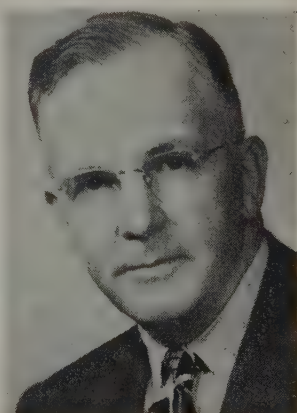
The next convenient date to put The World Calendar into operation is Sunday, 1



Senator Murray



Congressman Metcalf



Congressman D'Ewart

January 1956, when both the present and proposed new calendars agree. I believe the United States should join with the 17 governments which already have given The World Calendar approval and thus aid in support of world-wide adoption of the plan. I shall appreciate your backing in the Congress for this worth-while proposal.

Will you please advise me of your own personal reactions to The World Calendar, and also indicate what official support you will give in the Congress. Thank you.

I was fairly sure that the reply from Senator Murray would be favorable, for he had been one of two U. S. senators sponsoring a resolution in 1946 which advocated adoption of The World Calendar. But I was genuinely pleased to get a favorable reaction from the entire Montana delegation. It should be pointed out that support for The World Calendar is definitely bi-partisan. The Murray resolution of 1946 had a Republican co-sponsor. Three members of the Montana delegation in the 83d Congress are Democrats and the fourth is a Republican.

Senator Murray's letter to me remarked "the proposal has great merit." As senior Senator from Montana, Senator Murray has served in the Senate since 1934. It was in July, 1946, that he and Senator H. Alexander Smith of New Jersey introduced their resolution in the Senate. In his letter to me, dated 22 January 1953, Senator Murray writes:

"I have received your letter of January 14 regarding the proposed World Calendar. As indicated in your letter I have previously been interested in this subject and have indicated my support for a World Calendar. I still believe that the proposal has great merit and if it should be considered by the Senate, it is my intention to give it my support."

The 1946 resolution, of which the Senator sent me a copy, was phrased as follows:

"Resolved, That the Committee on Foreign Relations, or any duly authorized subcommittee thereof, is authorized and directed to make a thorough study and investigation of the desirability and feasibility of the adoption for use within the United States, and promoting and encouraging the use throughout the world, of a revised calendar, generally called The World Calendar."

At that time, the veteran Democratic Senator said on the floor of the Senate:

"This proposed calendar has been the subject of widespread study by learned men and women the world over, and has received the endorsement of many groups and organizations interested in the proposal.

"In view of the extended explanation already made in the House of Representatives, I shall not take the time of the Senate to explain in detail. I believe the proposal is worthy of early study by this branch of the Congress, and, therefore, on behalf of myself and the junior Senator from New Jersey [Mr. Smith], I am submitting a resolution in the Senate in order to bring the matter to the immediate attention of the Members of this body. Of course, this measure cannot be considered during this session. It is to be hoped, however, that during the recess the Members of the Senate will study the proposal and will be prepared to consider it during the next session of Congress.

"Briefly, Mr. President, the new calendar would divide the year into four equal quarters. The revised calendar is balanced in structure, perpetual in form, and harmonious in arrangement. If senators will read the full explanation which appears in

connection with the introduction of this proposed legislation in the House of Representatives, I believe they will find the major details there.

"The Newspaper Advertising Executives Association, Inc., and many other important organizations recommend the enactment of this legislation. These constitute important aggregations of business, scientific, educational, labor and fraternal organizations, and private institutions and bodies.

"Mr. President, I also ask unanimous consent to have printed in the *Record*, as part of my remarks, a collection of comments from the press, from various organizations, and from various persons, dealing with this subject."

It is worth noting that his co-sponsor, Senator Smith, was re-elected last November and thus is back in the Senate to continue his position. Senator Murray, who was chairman of the Senate committee on labor and public welfare in the 82d Congress, entered public life as county attorney of Silver Bow County, Montana, in 1906. When he came to the Senate to succeed the late Thomas J. Walsh, a nationally known figure who had been a vice-presidential candidate, he soon made a name in his own right as a liberal and supporter of social legislation.

His colleague in the Senate from Montana is Senator Mike Mansfield, whom the voters of the Treasure State promoted after five terms in the House of Representatives. Already Senator Mansfield has been named, as a freshman senator, to the important Senate committee on foreign relations. In his letter to me, dated 28 January 1953, he promises thoughtful consideration for *The World Calendar*, as follows:

"This will acknowledge receipt of your letter of January 15th which I was delighted to receive and which I read with much interest. I do not have any idea on *The World Calendar* but you may rest assured, in view of your last letter and previous correspondence, relative to this matter, I will be most happy to give it every possible consideration when and if it comes before our committee for consideration."

Senator Mansfield, who made some sort of record by enlisting during World War I in the U. S. Navy at the age of 14, has had a colorful career. He also has served in the U. S. Army and Marine Corps, stationed in the Far East, worked in Butte's famed copper mines, and taught political science as a professor in Montana State University. He is a Democrat.

In the House of Representatives, Representative D'Ewart is beginning his fifth term in that body after five sessions in the Montana legislature. The Republican congressman is a successful rancher and stockman, active in reclamation activities. He said, in his letter of 2 December 1952, to me:

"I am in receipt of your letter of November 24 concerning a sane and sensible calendar system. There has been some correspondence concerning this new calendar over the past year, and I agree with you that it would be an improvement over the present system. I note the next convenient date to put *The World Calendar* into operation is January 1, 1956. I will be glad to cooperate with you, and other members of Congress toward this end."

Representative Lee Metcalf is a Democratic freshman in Congress but he has had considerable experience in public life since his graduation from Montana State University's law school in 1936. He comes to Congress from a seat on the Montana Supreme Court where he served as associate justice after a term in the Montana legis-

ature. He pledged his backing to The World Calendar in the letter which he wrote me 2 December 1952. It read as follows:

"I read with interest the pamphlet you enclosed on World Calendar reform. I have been aware of the need for such reform but haven't before particularly considered the way in which this could be achieved. I agree that the United States should join with the 17 other governments that have approved The World Calendar and will give the plan you advance any help I can as a member of Congress."

That's a Congressional nucleus of able and experienced support. If the delegations from the other 47 states are similarly cooperative, the United States will soon join the 17 governments which have pledged their backing, as Representative Metcalf writes.

The Congressional background of calendar reform is definitely encouraging. In the past it has had the active interest of such able leaders as the late Congressman John Kee of West Virginia and the late Senator Elbert D. Thomas of Utah, together with four members of the present Senate—Estes Kefauver of Tennessee, Karl Mundt of South Dakota, Alexander Smith of New Jersey, and our own James E. Murray.

I remember very well the excellent speech made by Karl Mundt in January 1947, in which he told his fellow Congressmen: "Time rules us all. The most powerful and the weakest are equally impotent to stay time. Mighty as is this nation, it cannot add or subtract one second, or even the fraction of a second. Time is the master of man and matter. Each of us exists in relation to time. Nothing is more fundamental or universal. . . .

"Nevertheless, our measurements and standards of time are man-made and still far from perfect. In considering calendar revision we should recall these facts because historically they have been vainly challenged whenever calendar changes have been made. Opposition and protest were silenced by universal acceptance, and we recall them only with difficulty and amazement.

"We measure the day and its subdivisions with astonishing accuracy. It is only the longer periods of time, as embodied in the calendar, which need revision. The uninitiated think of the calendar as unchanging and unchanged. Actually, like all contrivances of civilization, the calendar is a product of evolution, and the system we use today is the result of much trial and error.

"This is an unusual bill which I am advocating. Probably never before has there been a bill introduced in Congress which in its terms of reference goes back to the year 4236 B.C., and which surveys in its text all the intervening centuries. The world needs stability, and only by revision can the stability of the calendar be achieved.

"This is the first time in the history of this country that a bill for calendar reform has been presented on the floor of both Houses, and the first time that any calendar bill has had bi-partisan support. Time belongs to no party. And the time has come for us to lead the way in adopting a modern calendar for the modern world."

It was during the same period that Congressman John Kee, then chairman of the Foreign Affairs Committee, made an equally impressive address from the opposite side of the House, urging that "our government should assume a position of leadership in this improvement, which will not only be beneficial to this nation, but will also be influential internationally and helpful to all humanity."

QUICK RESPONSE from LATIN AMERICA

By Eva Beard

THROUGHOUT the Americas south of the Rio Grande, the idea of a new and more convenient calendar has met the quick response of many minds in many countries. Mexico, Peru, Chile, Brazil, Uruguay and the Central American republics have always shown a keen interest in calendar matters, and at international conferences they have been among the first to approve calendar reform.

The reason for this special interest, greater than that shown in many European countries, is undoubtedly historical. It lies in the wealth of ancient calendars which have been found and studied in the central and southern continents. This area is the Sun-god's realm. Aztec, Maya, Inca—one and all they bowed before the night of the lifegiving, fiery deity.

The Incan calendar, developed, apparently, by means of the simplest astronomical instruments, was of a year of 12 "quillas" of 30 days each, with five days added at the end of each year. As quillas were computed from the moon's rotation instead of that of the sun; and as the monthly moon rotation is completed in 354 days, 8 hours and 48 minutes, the Incan quillas of 30 days plus the additional five days brought their year very close to the solar year. To make it exactly coincide, an extra day was added every fourth year, precisely like our system of leap years.

Mayas and Aztecs had calendars simi-

lar in many respects, and both races regarded the annual five days as unlucky or evil. But in Inca land, the extra days were beneficent—a sort of extra dispensation of the Sun-god, during which the hard-working, oppressed people might make high holiday until the New Year. It was then that the remarkable music drama of Ollantay was performed, parts of which are still given by the Peruvian Indians. Much of the haunting "calendar music" has become part of the world's heritage.

The writings of the Spanish Viceroy Toledo have left us an account of the coming of the Incan New Year, as told him by an old Incan prince baptized by the Spanish priests. On the first day of September, the beginning of the Peruvian summer solstice, the Inca, "son of the Sun," gorgeously clad, left his palace riding in a jeweled, golden litter. High priest, Virgins of the Sun, princes, chiefs of the warriors, all nobles accompanied him. A crowd of 50,000 greeted his arrival at the central plaza of Cuzco, before the Temple of the Sun; an orchestra of 375 pieces, including a dozen different instruments—ancient forms of flutes, pipes, little organs, guitars, cornets, trumpets and drums—played plaintive melodies. As the sun rose over the mountains the Inca, rising in his litter, lifted his finger and began the chant of the day of Capak-Raymi, when the Sun-lord reached nearest to the land and thus told the people of the

coming of a new year. Maidens sang together five chants to the sun, the moon, the stars, the rainbow and the Inca. Within the temple, the Inca made obeisance to the gods and his ancestors, until the rays of the lord of day struck upon his golden image. At this moment he lighted the sacred fire by means of a mirror reflecting the sun's rays upon charred cotton. From this fire the Virgins of the Sun kindled other fires in the temple and people hurried joyfully to light home fires, for none had burned anywhere since the night before.

So, or not greatly otherwise, it may have been at the coming of the new year of a far more distant past in the prehistoric city of the Sun-god, on the shores of 12,500 feet high Lake Titicaca of the Bolivian Andes. Upon the ruin field of Tiahuanaco, modern archeologists, among them Professor Arthur Posnansky of La Paz, have traced the foundation outlines of buildings—temples, palaces, fortress.

From the archeologist's standpoint, only the beginning of exploration of this site and of the surrounding country of the Altiplano—the high, mountain ringed plains—has been made. Dr. Wendell C. Bennett's report of Excavations at Tiahuanaco as director of the American Museum of Natural History's expedition is now nearly 20 years old.

Before the Sun-Temple of Kalasasaya, "place of stones," was found lying half buried in the mud the Gateway of the Temple—the "Calendar," if such it be, which has become the center of much fantastic theory and speculation. Hewn out of a single block of almost glass-hard andesite 10 feet high, 12½ feet wide, 1½ feet thick and weighing about ten tons, the intricate, finely organized ornament of

the front of this massive portal is of immense interest. Without steel tools and accurate mathematical instruments it seems impossible that one of the hardest existing rocks could have been cut to such perfect angles, with such true, sharp edges. Carving is sometimes more than 6 inches deep.

Many finely worked building stones found at Tiahuanaco are even larger and heavier than the so-called "Calendar" stone. And the problem of how these great stones were transported from distant mountain quarries remains unsolved; as does the puzzle of how a civilization sufficiently advanced to possess fine artists, craftsmen, city planners rose and flourished in a most distant past upon the infertile Altiplano.

If the symbolism of the Calendar Gateway remains obscure, and archeologists refuse to grant it any precise calendrical significance, it is of undoubted artistic interest. The center presents at the top a strikingly commanding figure apparelled in ceremonial robes and holding insignia of power or rank in his hands. He stands on a high pedestal of peculiar form, this pedestal resting on an elaborately conceived meander whose bays contain eleven heads or faces. Each one of these is surrounded by a sun ray "halo" of 24 symbols—the days, in the minds of those who wish to believe the stone a practical calendar. On either side of the central figure are two panels of fifteen closely grouped winged figures each, whose meaning defies explanation even in the minds of the most optimistic proponents of the Calendar theory. Included in the intricate ornamentation of the Gateway are flying fishes, heads of condor and puma, and what is assumed to be that of the placid, grass eating toxodon, an animal which presum-

ably has been extinct since the Tertiary.

That there should have been a people of advanced culture in the southern continent at a time much earlier than had once been believed does not now seem so impossible. And such a people would have possessed some organized means of measuring time. More and more it appears from scientific findings that man has been in residence in the New World nearly as long as in the Old. Most recent evidence is the discovery by Dr. George F. Carter, chairman of the Johns Hopkins University School of Geography, deep in the gravel terraces of California streams, of man-made tools that must be more than 100,000 years old. Therefore, he reasons, man must have come over a landbridge from Asia not at the time of the fourth and last glacier age, some 13,000 years ago, but during the third glacier period, about 400,000 years ago. The oldest European artifacts are not more than 500,000 years old.

Thus there may have been time on the Western continent as in the Old World for man's long journey up from savagery. And as those intrepid navigators of the balsa raft *Kon-tiki* have shown lately, men could have travelled westward across the Pacific from South America, as well as eastward from Polynesia, home of the world's greatest early navigators.

From whatever region the inhabitants of Polynesia wandered in long past ages, it is clear that their knowledge of arts and sciences must have been elementary when they settled in the isles of the Pacific.

Whether or not their origin was South American, the Polynesians had forgotten all about it by the 14th century, when they established colonies in New Zealand

and became the ancestors of the Maori.

In their new home the Maori—the "original inhabitants" they liked to call themselves, although they had driven out earlier inhabitants apparently of Papuan race—made their rude time chart, their calendar, to suit their needs.

There was no precisely measured year; nor any dependable system of chronology for counting the years. No man knew how old he was. The only serviceable unit for the defining of long periods of time was the human generation—hardly a precise measurement.

For his simple needs, the ancient tribal farmer of New Zealand knew enough about time. When the season of planting and seed sowing approached, did not the blossoms of a beautiful red flowered vine tell him, the song of insects, the mating of birds and their new song of spring, the return of migrant cuckoos from distant lands?

With the coming of white men, much of the tradition, the myth and legend of primitive man were lost forever and with them invaluable insight into the meaning of "time" to a race primitive indeed but capable of becoming highly proficient at need, as in the astronomy necessary for navigation. The white man's calendar, grown out of the white man's needs, was imposed upon him, along with many other ways of the superior race of doubtful use to him. Today men of all races are nearer together in culture—in time and space. It is a new world, the world of the atom, the world of Everyman. And thus a new need is born—the need of a universal time chart which speaks in the same tongue, the same language to all—The World Calendar.

HOW TO CREATE MASS ENTHUSIASM

By Mervyn Jones

(In the London New Statesman and Nation, 3 January 1953)

I MUST confess that, during the years of supposed youthful curiosity, and indeed up to the present, I never wondered why the calendar is different every year. The arrangement, which enabled me to substitute calendars for Christmas presents, seemed a good one, as it doubtless seems also to the calendar manufacturers. The other day, however, I was brought up short by a pamphlet issued by The World Calendar Association, which asked me bluntly whether I threw my watch away every morning. Having conceded that I do not, I was led to examine the case for a calendar which would be the same year after year.

The human race, it appears, has in its time invented nearly a hundred different calendars, of which a dozen are still in use in India alone. The present calendar is just as arbitrary and changeable as the rule of the road or the number of pence in a shilling. In fact, since no time-handling devices save calendars are manufactured, and calendars are renewed each year anyway, they could be changed far more easily and cheaply than the coinage, the Fahrenheit thermometer, or the system of weights and measures.

The Julian calendar is really a pretty good and accurate one; it must be, since it has governed the greater part of the civilized world ever since it was promulgated by Julius Cæsar. The Gregorian calendar, which has spread gradually round the world from France in 1582 to Turkey in 1927, and which caused so much fuss when it was adopted in England just two hundred years ago, was not really a new calendar, but a readjustment made necessary by Julius Cæsar having got his leap years not quite right. However, the Julian-Gregorian system is far from perfect, and indeed every calendar has its faults. Astronomers make this perfectly clear by disdaining all calendars and simply letting the days run on from 1 January 4713 B.C., the last date on which the main calendar cycles of history coincided. This system, fortunately, is in purely professional use, and nobody is in danger of being asked to lunch by an astronomer on Day two million six hundred thousand and something.

The trouble with the present calendar, from the point of view of convenience, is that the year has 365 days, or 366 in leap year. This figure has nothing to recommend it, beyond the fact that it does measure the time taken by the earth to go round the sun. It cannot be divided into equal quarters or even (except in leap year) into half. It cannot be divided into seven-day weeks. Even the months are of unequal length, though here matters were made worse by the Emperor Augustus who, in order to have thirty-one days in his month, took a day away from Februarius.

As things stand, then, Christmas sometimes falls conveniently near the week-end

and sometimes maddeningly in midweek. Monday's child has his birthday one year on Thursday and the next on Friday. School terms begin on a different date each year; the 1951 autumn term may have 61 teaching days, that of 1952 may have 64 and demand a revised syllabus. American elections are not always held on 4 November, but on the Tuesday after the first Monday in November. The University of London announces its matriculation exam. for "the Tuesday within the period May 26 to June 4 inclusive." And we read those infuriating statistics which tell us that, though Britain produced more coal in April than in March, the rate of production really fell because April, this year, had more working days than March.

For all this muddle there is a simple remedy—to have a year with only 364 days. This gives you 91 days to each quarter. The quarter can be divided into a month of 31 days (January, April, July, October) and two months each of 30 days. This ensures that every month has 26 weekdays. The great thing, however, is that the year will have exactly 52 weeks, and so holidays, birthdays, meetings, and the like can be made to fall on the same day of the week as well as the same date every year. The year can begin on a Sunday, and Christmas will always be a Monday. That, in summary, is the proposed World Calendar.

Of course, as we cannot make the earth go round the sun in 364 days, there must be a day over. The World Calendar faces this problem blithely, admitting that the day is surplus, buckshee, extracalendrical, and sticking it on at the end of the year, between the last day of December and the first of January. It is just a day—but a rather special one, a holiday pertaining to no national or religious commemoration, and therefore to be called *Worldsday*, *International Peace Day*, or something like that. In leap year there would be another world holiday, this time after the end of June.

The idea of a 364-day year was first suggested in 1834 by an Italian, the Abbé Mastrofini, and taken up by Comte, who proposed a year of thirteen equal months on a lunar basis. These two proposals—that outlined above and the thirteen-month year—have been rivals up to the present day, but now The World Calendar clearly holds the field, and all but the most irreconcilable thirteen-monthers agree that their calendar has little chance; its change is too radical for general acceptance, there is the factor of superstition, and the logical objection that a thirteen-month year would have no quarters. The first calendar reform Bill came before the House of Commons in 1908, but it was between the wars that the project seemed to be nearest success. The League of Nations called a conference and won the approval of fourteen nations; in this country, the Trade Union Congress and the Federation of British Industries were among many supporting bodies. As a matter of fact, it is hard to see how anyone could oppose The World Calendar, and indeed active opposition is confined to certain Sabbatarians, who claim that *Worldsday* would disturb the sequence of Sabbaths; but no major Church seems worried by the prospect. Some people, of course, would lose their birthdays, but they are hardly likely to form a Resistance movement.

The World Calendar Association—headquarters in New York, branches in many countries, one just formed here to revive the disintegrated pre-war organization—embarks every five or six years on a spirited campaign. Confidence yields gradually

to doubt, then to disillusion, and to a resigned postponement of the day of triumph. The reason for this cycle is that the new calendar could be introduced most smoothly at the start of a year which begins on a Sunday anyway. The next target year is 1956, and this time there is a real chance of success, with several nations pledged to the cause and hoping to raise it at the U.N. General Assembly.

While I wish The World Calendar Association all good luck, I am not sure that it is going about its work in the most promising way. The enemy, of course, is apathy, and this will not be dispelled by pedestrian, calculating propaganda. As any politician will admit, you do not popularize a scheme by stressing its neatness and logic, but by claiming to open a new era, to liberate mankind from a burden of care. I do not like the argument, well-meant though it clearly is, that the new calendar could be introduced so smoothly that it would hardly be noticed. That is likely to make people feel that something is being put over on them by a set of clever dicks—just what the rioters of 1752 felt as they yelled for their eleven days. Nor will any mass enthusiasm be generated by an explanation of the benefits accruing to such untypical, and unexciting, classes as statisticians, accountants, lawyers, and the men who work out Pay-as-you-earn. Who cares, frankly, whether such people's work is made easier or not? No, no; Garrison did not preach the abolition of slavery by promising to simplify the work of Southern auctioneers.

What this cause needs is an "angle" that will arouse the general public and generate enthusiasm with the man in the street. Manufacturers of household products have learned the magic of "eye appeal" in packaging. The calendar is not just a matter of logic and sober reasoning—it has emotional and spiritual overtones just as important as its economic and historical backgrounds.

It seems to me that the key to popularity for The World Calendar is Worldsdays. The new Leapyear Day, falling at the end of June, is good too. Nobody wants any more February; we want to get into March; but an extra summer day is a gracious gift. The annual Worldsdays, however, is the real winner. It was already an excellent idea to start the year on a Sunday. Many a Scot, who has dragged himself with throbbing head to his London office, would be thankful for this alone. But gratitude will change to enthusiasm when that Scot learns that the year is to end with an extracalendrical day—a nimble carefree day, a sprite of a day, a glorious day whereon no bills may mature and no rent may fall due. And of course it is not only Scots who will gather at those extracalendrical parties promised us by the brainwave of the genial Abbé Mastrofini. There will be no trouble with the Lord's Day Observance Society, for Worldsdays will not be a Sunday so much as a gloriously prolonged Saturday night. The whole proposal, if properly put across, has a superb appeal. There is a Rabelaisian grandeur of spirit about this cosmopolitan binge, these thirty-six hours of revelry resounding from pole to pole.

I was about to write that the extracalendrical party will dwarf anything yet seen on earth, when, consulting my brief history of the calendar, I found that under the Ptolemies the Egyptian year had 360 days. The five extracalendrical days, or six in leap year, were taken all together at the end. That must have been really something.

SUMMARY OF WORLD-WIDE ACTIVITIES

By Harriet A. Lillie

Secretary-Treasurer, The World Calendar Association, International

INCREASED international activities on behalf of calendar reform were reported at the sixth annual meeting of The World Calendar Association, held in New York City on 15 January. In order to meet the requirements of these augmented activities, two new posts were created in the international organization—an Assistant Director General, Arthur J. Hills of Ottawa, and a Liaison Officer, James Avery Joyce of London, England.

Countries represented at the meeting were: Argentina, Australia, Belgium, Canada, China, Cuba, France, Great Britain, Greece, Japan, Mexico, Nicaragua, Norway, Panama, Peru, Philippines, Salvador, Spain, Switzerland, Uruguay and the United States. Reports were also received from India, Ireland, Netherlands, New Zealand and Sweden.

Officers of the international organization were re-elected as follows: President and Director General, Elisabeth Achelis; Vice-President, Charles S. McVeigh; Secretary-Treasurer, Harriet A. Lillie. Reorganized affiliates for China and Great Britain were elected to full membership, and formal approval was given to a World Advisory Committee of 51 members representing 33 countries.

The President, in her opening address, pointed out that the most active organizations during 1952 were Canada, France, Great Britain, Japan, Panama and Switzerland. The standing of calendar reform in Canada has advanced to the stage of government approval and it is indicated that Canadian delegates will be found on the side of The World Calendar whenever the subject comes up for international discussion. In France, renewed interest has been shown through the leadership of M. Albert Caquot, head of AFNOR, the Association Française de Normalisation, who spent a month in the United States in connection with the triennial convention of the ISO—International Organization for Standardization. In Great Britain, a revival of activity has been stimulated by Lord Merthyr, James Avery Joyce, Benjamin Herrington, and others; meetings have been held in the House of Lords, the House of Commons and at the Royal Society of Arts. Japan has published the first two of a series of impressive monographs on calendar reform, and Panama has shown similar enterprise in an 84-page booklet in Spanish, issued by the chairman, Juan Rivera Reyes. In Switzerland, the International Organization for Standardization is making an energetic effort to rally all members of that organization to support The World Calendar.

Looking forward to the year 1953, the President predicted important developments in India, Ireland, Sweden and New Zealand. New interest in the subject of

an improved calendar has developed in several countries where no affiliated committees have hitherto existed. Thus, in India, Prime Minister Nehru has appointed a National Calendar Committee whose preliminary activities are both comprehensive and energetic. However, there are still "weak spots" where it would be gratifying to see similar signs of awakening interest. South Africa, Syria and Egypt are not showing any organized activity; Italy has been inactive for years, and it would be highly encouraging to have Denmark, Finland and Russia take a more positive position.

Detailed reports, submitted by nearly all the affiliated organizations, included the following highlights:

Argentina. In the death (14 July) of the Argentine chairman, Admiral José A. Guisasola, the cause of calendar reform has lost one of its most influential supporters; Admiral Guisasola, before his retirement, had been Chief of Staff of the Argentine Navy. In this capacity he visited the United States in 1941, and spent a considerable time conferring with officers of the international office of The World Calendar Association. His interest in calendar reform dated back to the early years of the century; he took over the chairmanship of the Argentine committee in 1940. His co-members, the Reverend Juan V. Monticelli, Meteorologist Juan O. Mariotti, and Sea Pilot Hugo Cozzolino, are continuing the committee and reorganizing it for an active campaign in 1953.

Australia. Calendar reform in Australia has thus far lacked a strong civilian organization to support and direct a nation-wide promotional and educational campaign. The cause has been represented by an official committee appointed by the National Research Council, whose activities were confined to such research as was directed by that body. The Council has given its decision in favor of The World Calendar, and has now disbanded its committee. It will therefore be necessary to form an independent group to organize a widespread popular demand for government support.

Belgium. Definite official statements have been made during the past year indicating that the Belgian government will support The World Calendar in any international discussion of the subject. A thorough review of calendar revision was made by the government three or four years ago, and the policy then outlined, and now in force, was entirely favorable to international adoption of the 12-month equal-quarter plan. This position was supported not only by the Foreign Office but also by other departments, which emphasized the sound economic aspects of the reform.

Canada. Considerable progress has been made during the year in advancing the cause of calendar reform. The official government attitude is clearly sympathetic, and will always be found on the side of The World Calendar, whenever the subject comes up for international discussion. The Government welcomes the support and promotional activities of labor, industry, science and education.

Throughout the year, Chairman Arthur J. Hills was active on all fronts. The press continued to give good support to the cause. Syndicated articles were widely published. The 200th birthday of the Gregorian adjustment directed an almost universal attention to the present calendar—and its deficiencies.

Under the guidance of the chairman, special activities on behalf of calendar reform were noted in the Department of Labor, the Bureau of Statistics, the Canadian Broadcasting Corporation, the Canadian Chamber of Commerce and the Rotary Clubs. Passage of a bill in the House of Commons to have Victoria Day observed on a Monday prior to the 25th of May gave opportunity to point out the merits of a fixed perpetual calendar from the angle of stabilized holidays. The feature radio program "Cross Section" devoted its New Year's Day program to calendar reform over a Dominion-wide hookup.

The Chamber of Commerce, at its meeting on 20 October, made calendar reform the subject of a "Policy Declaration" which requested the Canadian government to "take the

initiative in having The World Calendar placed on the agenda of the United Nations General Assembly at the earliest possible date."

The visit to Canada of James Avery Joyce, Honorary Secretary of the British Section of The World Calendar Association, was interesting and important. In company with Chairman Hills, Mr. Joyce visited Toronto, Ottawa and Montreal, for discussions with officials, business men and the press. In Ottawa he had a press conference in the Press Gallery of the House of Commons, and later addressed the Canadian Authors Association.

China. Reorganization of the Chinese committee, now established on the island of Formosa, resulted in this group making application for full membership as an affiliate. Because the former chairman, Dr. Ch'ing-Sung Yü, has for some time been in the United States as a staff member of the Harvard Observatory at Boulder, Colorado, it seemed appropriate for the China affiliate to choose a new director for its work in Formosa. The new chairman is Dr. Chu Chia-hua, one of the Honorary Presidents of the World Federation of United Nations Associations. It will be remembered that he presided in 1951 at a meeting of the Academia Sinica where the subject of discussion was The World Calendar. The meeting resulted in an enthusiastic endorsement of calendar reform and later in the publication of a 44-page report for world-wide circulation.

Dr. Chu Chia-hua was unable to attend the annual meeting of The World Calendar Association, International, and assigned Mr. W. Y. Yen of the United Nations Library to act as his representative. Mr. Yen, in addressing the meeting, spoke highly of Dr. Chu's interest and enthusiasm, and assured the international association that his lectures and letters would be highly influential in arousing interest to demand action in 1953.

France. Progress in promoting The World Calendar in France was considerable in 1952, with leadership centering in M. Albert Caquot, head of AFNOR—the Association Française de Normalisation. The AFNOR study of calendar reform is still in progress, aided by a substantial grant from the international headquarters of The World Calendar Association. M. Caquot's enthusiasm, previously manifested at Paris and Geneva, moved across the Atlantic during the summer, when he spent a month in the United States in connection with the triennial convention of the ISO—International Organization for Standardization. Presiding over the convention meetings, M. Caquot had an exceptional opportunity to transmit his fervor for calendar reform to delegates of many nations. Among his converts was the newly elected President of ISO, Dr. Hilding Törnebohm of Sweden, whose scholarly study of calendar reform has been published in English and Swedish.

The French press has continued to be cooperative with the cause of calendar revision, and many approving articles have been published both in Paris and in the provinces.

Great Britain. Reorganization of the British affiliate was initiated early in 1952, thanks to the active interest of Lord Merthyr and of James Avery Joyce. The new campaign was launched in Committee Room Four of the House of Lords on 6 May. The meeting was called by Lord Merthyr, who presided. He had invited about fifty representatives of leading scientific, business and social organizations. Their two-hour conference was a round-table discussion of plans to arouse renewed interest in Great Britain and to obtain official support for action through the United Nations. The meeting appointed a Committee of Twelve to set up a permanent organization to be known as the *British Section of The World Calendar Association*.

Lord Merthyr agreed to act as Chairman of the committee. Mr. James Avery Joyce, international lawyer and lecturer, was invited to serve as Honorary Secretary, and Mr. Benjamin Herrington, O.B.E., former superintendent of Customs and Excise at Liverpool, was named as Honorary Treasurer. One of the enthusiastic advocates of calendar reform at the preliminary meeting was I. J. Pitman, Conservative Member of Parliament and prominent business leader. Another was Dr. L. E. C. Hughes, well-known scientist. The Astronomer Royal, Sir Harold Spencer Jones, indicated that he fully supported the purposes of the proposed organization and would be happy to speak for calendar reform at a public assembly to be held later, in the auditorium of the Royal Society of Arts.

This meeting, with the Astronomer Royal as chief speaker, was held on 17 October.

Sir Harold's address was widely reported in the London and provincial press, and comment centered particularly on his remarks concerning action by the United Nations. The newspapers especially endorsed his statement that: "It is to be hoped that proposals for calendar reform, now before the U. N., will be seriously considered on their merits. Governments are inclined, in subjects of this kind, to take a *laissez-faire* attitude and to argue that 'there is no general demand' for such a reform. But surely it is the duty of governments to lead their people in matters of general betterment—and this reform is urgent international business. The best countermeasure to the delays and postponements of the politicians and diplomats is to obtain the widest measure of support for our cause, by means of a vigorous campaign to expound its advantages to the ordinary man. . . . Different plans for revision have been proposed. To my mind there is only one that is deserving of serious consideration and that is the calendar advocated by The World Calendar Association."

The meeting at the Royal Society was so well received that two months later, on 17 December, another session on calendar reform was held under the same auspices—this time with Lord Merthyr as the principal speaker. The meeting had been announced as an observance of the calendar's 200th birthday, and Lord Merthyr opened with the following significant remarks: "It is appropriate that in the year 1952 attention has been focussed on the calendar, a facility which is in such constant use that we take it for granted, and do not pause to consider whether it could be of even greater assistance to us. It is just 200 years since the Julian calendar gave way in Britain to the present Gregorian calendar." After discussing various proposals for "a new Gregorian Calendar," the speaker gave his approval to the 12-month equal-quarter plan and added: "The World Calendar Association, with headquarters in New York, is the present sponsor of the 12-month reform—and I should like to pay tribute to it, and in particular to its President, Miss Elisabeth Achelis, who is literally devoting her life to this reform—which I am convinced will one day be adopted. I hope that her name will always be associated with it. She is nobly carrying on against the innate and deep-rooted conservatism which permeates our world and clogs the wheels of progress."

The list of 1952 publications by the British affiliate includes three booklets: (1) *Now Is the Time*, by James Avery Joyce; (2) *Past, Present and Future*, by Sir Harold Spencer Jones; (3) *Social and Religious Aspects*, by Lord Merthyr. A fourth monograph in this series will appear early next year, entitled "*The Calendar in British Industry*," by Harold Watkins, M.B.E., a research study in the economic and financial aspects of the calendar. The British committee has been active, also, in press relations, in broadcasting and on the lecture platform.

The Honorary Secretary, James Avery Joyce, devoted his summer vacation to a tour of the United States and Canada. He spent considerable time at the United Nations, discussing calendar reform and other subjects with various delegations and making many friends for himself and his causes. He is a gentleman of inexhaustible energy and infinite resource. His lectures in the United States and Canada held audiences of varied types—sometimes intellectual, sometimes industrial. His contacts in Canada were largely official, extending right up to the Foreign Secretary, Lester Bowles Pearson, who a few days later was raised to the Presidency of the United Nations.

This was Mr. Joyce's sixth trip to the United States. His familiarity with the American scene and with international relationships has been very helpful to the British committee in its work, and in slanting its promotional activities in a way which will be helpful to the cause of calendar reform not only at home but also abroad.

India. It has taken a long time for the agitation on behalf of an improved calendar to reach the stage of official action in India. More than 20 years ago, Mahatma Gandhi began advocating calendar reform, which he regarded as an important potential force for unification in India. Now at long last his teaching has begun to bear fruit.

In the early fall of 1952, Prime Minister Nehru appointed a "Calendar Reform Committee" to study the whole complicated question of the need for an Indian National Calendar. The committee includes the Minister of Education, Dr. Maulana Abul Kalam Azad, and the distinguished scientist, Professor M. N. Saha of the Institute of Nuclear

Physics, together with several other important public men representing a wide variety of interests. Both are well-known supporters of The World Calendar.

A report on "India's Calendar Confusions" was written by Professor Saha during the summer, and published as a scholarly 30-page monograph by the Indian Science News Association of Calcutta. This preparatory study was intended in part as a "briefing" for the Prime Minister and others who were quietly taking up the problem. It indicates the whole horizon of need for revision and includes specific recommendations for adopting and policing the reform. Support of The World Calendar plan is unqualified. Says Professor Saha: "This plan represents a far-sighted improvement on the current Christian (or Gregorian) calendar, which is now used in a great part of the civilized world, but which in many ways is an extremely inconvenient and unscientific system of time reckoning." A somewhat abbreviated abstract of Professor Saha's study has been prepared by the international headquarters of The World Calendar Association, and is available on request.

Ireland. Growth of interest in calendar reform throughout Ireland is reported in correspondence with members of The World Calendar Association at the University College of Dublin. This increased interest stems largely from the expansion of factories and of mechanized agricultural production. At the same time there is steady demand for calendar standardization from the whole educational field, which finds the current system with its wandering dates a never-ending source of confusion in scheduling scholastic activities.

Professor John J. O'Meara writes from Dublin: "Reform in administration and method is of course the order of the day in Ireland, as it must necessarily be in any new and rapidly developing country. Most of these reforms are internal matters and can be got under way without too much difficulty. But calendar revision cannot be undertaken by any single nation or group of nations: it must be done more or less simultaneously the world over—and a small country like Ireland is hardly equipped to undertake the leadership in such a crusade. Nevertheless, Ireland wants this change, and most of our leaders realize keenly the need of it and the substantial benefits which will accrue from a better time-measuring system."

Japan. Two important monographs on calendar reform have been published and circulated in Japan during the past year. The first of these is a brief presentation of the subject in 16 pages, the second is a more comprehensive discussion in 48 pages.

The first publication is entitled "The World Calendar," and is intended as a vivid popular presentation of the need for a revision of the present calendar. It seeks to clarify the whole problem for the ordinary reader as well as for the intellectual, presenting its argument in a simple, concise and logical manner. Its opening page summarizes the defects of the Gregorian calendar in 12 paragraphs. Then it discusses briefly the history of calendar reform, mentioning the prominent advocates of the movement throughout the world, and summing up the various remedies which have been proposed. The story of The World Calendar gives details of progress since 1930, and emphasizes the merits of this proposal, listing also the 17 governments which have supported it in international meetings. With this much of general introduction, the pamphlet moves into a definite application of the new system in Japanese life, suggesting the probable treatment of the nine national holidays which are observed under the law of 1948. It is recommended that three new national holidays should be established—Foundation Day in February, War Termination Day in August, and Christmas in December. One reason for this recommendation is that three of the existing national holidays will fall on Sunday under the revised calendar—and Japan is unlike the western nations in that it does not customarily extend the observance of a Sunday holiday to the following Monday. The three current national holidays which will be affected by adoption of The World Calendar are: Adults' Day on 15 January, Emperor's Birthday on 29 April and Children's Day on 5 May. The pamphlet closes with a summary of the activities of the Japanese Calendar Association and its membership—after which there is a final summary of the practical advantages of the new calendar in all walks of life.

The second publication, which grew out of the public interest aroused by the smaller

one, is entitled "Calendar and Its History." It is a monograph authored by Dr. Noda, vice-president of the Japanese Calendar Association, and it is a complete scientific textbook on the calendar and its uses, both past and present. It opens with a discussion of the exact astronomical length of a solar year, and the reasons why three leap years have to be omitted every 400 years (as enacted into law in Japan in 1898, decreeing that the year 1900 should not be a leap year). Dr. Noda tells his readers about the origin of the seven-day week, and compares the present solar calendar with the ancient lunar calendar of Japan, which is still a familiar implement in the hands of small farmers and country folk. He refers to the tabulation of sun and moon eclipses and lists a few of the deep-rooted calendar superstitions that have a tenacious grip on the Japanese people. Halfway through the booklet the author moves into the great advantages of The World Calendar, which he calls "the ideal time-measuring device for the whole world to approve and practice." In applying the new system to national life and customs, he shows how it would affect the 35 main events of the Japanese year—all of which are followed and observed by the conservative Japanese people. "Every nation," he observes, "has its own particular calendar customs and sentiments, which will generally be maintained and continued inside the framework of an improved international system. Often these customs and sentiments are an enigma to other nationalities, but they have deep localized roots and are changed only with reluctance and pain." As far as Japan is concerned, Dr. Noda shows that adoption of The World Calendar will not require any radical changes, and he proves this by listing all the days and dates of the year 1953, both under the present calendar and under the proposed revision.

With these two basic booklets in circulation, all Japanese readers can quickly get a comprehension of calendar reform and its significance. A project for the future is a Japanese translation of the standard English textbook entitled *The Calendar for Everybody*, by Miss Elisabeth Achelis.

The annual meeting of the Japan affiliate was held on 28 June at the Osaka Municipal Planetarium. Discussion of program and planning for the next two years was effective and productive. Problems of the calendar in Japanese life and industry were exhaustively examined. An endorsement from the Doshisha University was presented and filed.

Public hearings on the whole calendar reform project were held at the Ohmi Shrine in June and November, with particular reference to the great variety of calendars now being published throughout Japan. Representatives of the groups which supply these calendars attended these meetings, coming from Osaka, Tokyo, Nagoya and other cities, and they showed keen interest in the proposals for a new universal and perpetual calendar.

Mr. Sadanobu Inoue, representing this Association, was honored early in the year with a fellowship appointment for the study of business techniques in the United States. Soon after his arrival there he delivered an address on The World Calendar at Duke University, where his audience included professors and students from 18 countries. At the end of the year Mr. Inoue was continuing his studies in New York City, and was directed to represent the Japanese affiliate at the annual meeting of The World Calendar Association, International.

Mexico. Under the leadership of Dr. Horacio Herrera, head of the Mexican Society of Astronomical and Geographical Studies, the Mexican affiliate has long since obtained from the government its full approval and support of The World Calendar program. On the basis of precedent, Mexico may be expected to vote for this reform in any international gathering where the matter is brought up for action.

With this much accomplished, the Mexican committee has felt it unnecessary to go over the same ground again with governmental units. From the viewpoint of general calendar backgrounds, it has encouraged the study of ancient American calendars and is happy to transmit to the international body a scholarly and exhaustive volume of text and illustration on *Ancient Calendars of Mexico*, which will be of the highest importance to all those who are interested in matters of this kind.

Netherlands. George A. E. Gleichman, chairman of the Netherlands affiliate, died on 18 June, 1952. He had served in this capacity since 1949. A new chairman has not yet

been named. Meanwhile the active group in Hoorn, under the leadership of W. B. Rombouts, has continued its promotional activities, including an interesting presentation of calendar reform in Esperanto, which has been circulated throughout Europe.

New Zealand. The chairman of the New Zealand affiliate, Dr. I. L. Thomsen, was a visitor to the United States during the year, in his capacity as director of the Carter Observatory and foremost astronomer of his country. His American engagements were in California and Boston; he spent only a few hours in New York. Speaking about the interest in calendar reform among New Zealanders, he wrote: "Although there is little fresh progress to report, activity is needed in the immediate future."

Nicaragua. For the first time in several years, a comprehensive campaign of information on calendar reform has been carried out in Nicaragua. The campaign centered around a series of five lectures sponsored by the national university, and delivered by Dr. José H. Montalvan, the Rector for Law. In these lectures Dr. Montalvan discussed in complete detail the history of the calendar in both hemispheres and showed the background of various plans for a new Gregorian calendar. Pamphlets dealing with calendar reform were distributed throughout the republic.

Norway. The attitude of Norway in regard to calendar reform continues to be definitely affirmative. This position was taken originally in a formal vote at the League of Nations and has been maintained ever since that time. It may be definitely stated that Norway will approve and adopt The World Calendar whenever it is accepted simultaneously by enough nations to make it internationally effective.

As chairman of the Norwegian affiliate, Major K. S. Klingenberg has long been an energetic champion of calendar reform; from his headquarters in Oslo, he has sought to educate national opinion regarding the need for a better system. He has always been confident that the Norwegian government would in the future, as in the past, support international efforts toward this end. As the year 1952 closed, the Norwegian affiliate had in the press a formal "Appeal to Parliamentarians," which will be distributed to all members of the Norwegian Parliament when they meet in January. The appeal suggests that "There exists no national prejudice, no special interest and no political bias against calendar revision: there is no reason that nations and peoples cannot unite in its accomplishment."

Panama. Under the title *Un Calendario Perpetuo Para El Mundo*, an 84-page monograph was published this year by Editora Panama America. Its author was Juan Rivera Reyes, president of the Panama Association for the Reform of the Calendar, and his handsomely printed book gave an impressive account of the activities of the Republic of Panama on behalf of calendar reform. A supply of these booklets was sent during the summer to international headquarters in New York City, and to all affiliates in Central and South America. Later the booklets were distributed to other countries of the World Federation of United Nations Associations. The response was very encouraging, indicating a wide and increasing interest in the subject. Dr. Rivera Reyes kept up a continuous correspondence during the year and was constantly in personal contact with the Panamanian Foreign Office and its representatives at the United Nations.

Peru. In Peruvian official circles, The World Calendar has long since been heartily endorsed and approved, and Peru's stand has been recorded in its votes and actions at international meetings of various kinds. There was genuine disappointment in Lima at the failure of the United Nations to act on this matter during its 1952 sessions. This was expressed to the Peruvian affiliate by Dr. V. A. Belaunde—Peru's U.N. delegate—on his return from New York in September, together with his assurance that he would do everything in his power to have this decision altered and corrected.

Philippines. During the past year the Philippine affiliate has covered all government officials with appeals on behalf of calendar revision. Under a new plan of action repre-

sentatives of the committee will visit the most important cities of the republic and address meetings of prominent people. The purpose is to establish a broader base of popular acceptance. Letters have been sent to all members of Congress, with a request that both Houses endorse The World Calendar and instruct their U.N. delegation to give this subject their active support. The matter will be taken up in Congress in January 1953.

Salvador. Again the Salvador affiliate has had the promotional cooperation of *El Diario de Hoy*, most important newspaper in Central America. The repeated appeals of this influential organ should insure a wide dissemination of information regarding calendar revision. At the same time, the chairman has been able to circulate additional informational material among professional men and leaders of public opinion.

Spain. There has been progress in organizing an active campaign for calendar revision in Spain. The chairman, Ramon Ximenez Gil de Avalle, was not discouraged by the somewhat chilly response to his first approaches to officialdom—perhaps because at the same time he found a sympathetic reception to his proposals among scientists, teachers and cultural leaders. It is now expected that an influential committee will be announced publicly early in 1953. The chairman had hoped to attend personally the January meeting of The World Calendar Association, International, but unfortunately the state of his health during the latter part of December did not permit him to travel.

Sweden. Organization of an affiliate in Sweden may be accomplished within a few months, as a result of the widespread interest attracted by the writings of Dr. Hilding Törnebohm, director of SKF (the Swedish Ball Bearing Co.). Dr. Törnebohm spent most of the summer in the United States, partly on business and partly to attend the triennial Congress of the International Organization for Standardization (ISO), which honored him by electing him its President for the next three years.

It was during his American visit that Dr. Törnebohm became interested in calendar reform, and on his return to Sweden he wrote about it for the local press. Later a comprehensive booklet of his views was distributed widely to influential business men and parliamentarians. The text said, in part: "I found the project for improving the calendar thoroughly worth while. It merits the consideration of a wider public. . . . Thus far, the Swedish government has not shown much interest. Among the Scandinavian countries, Norway is the only one which has registered its support with the U.N. However, many prominent Swedish citizens have been supporters of the proposed change—notably our great scientist, Svante Arrhenius, who shortly before his death made an address on the subject to an audience of Swedish astronomers. . . . There can be no doubt that strong forces are in motion to secure the adoption of the proposed new calendar within a few years. The Swedish people should be aware of this fact, and should inform themselves fully on the merits of the subject."

Switzerland. Principal activity in Switzerland has been at the Geneva office of the International Organization for Standardization (ISO), where President Albert Caquot and General Secretary Henry St. Leger have been actively circularizing their world-wide membership on behalf of a revised Gregorian calendar. In a letter signed by M. Caquot, under date of 8 December 1952, all standards groups are urged to join the movement:

"Realizing the very great advantages to be gained, especially from the economic aspect, by the adoption of a perpetual calendar, the French Normalisation Association has since 1950 been engaged in a very careful study of this project. . . . A reform such as this must be accomplished at an international level. That is why the ISO has been asked to try to bring about the reform, after first inviting member bodies to express their opinions regarding the possibility of the ISO taking up this question. I strongly recommend to all ISO member bodies that they accord their fullest attention to the examination of this proposed reform and submit their opinions to the General Secretary as requested."

Uruguay. Ever since 1937, Uruguay has been included among the governments which actively support calendar reform in all international meetings. Currently the country's

representatives, Messrs. Fabregat and Mora, are fully informed on this matter and are ready to give it their fullest cooperation at any time. Thus the Uruguayan affiliate is in a position of standing by, waiting for the rest of the world to catch up. The chairman, Professor Alberto Reyes Thevenet, spent a considerable part of the year 1952 in Europe.

United States. Activities of the United States affiliate have been increasingly concentrated on international aspects. Contact with the United Nations has been continuous throughout the year, and the relationship both with officials of that body and members of the various delegations has been increasingly friendly and helpful. Toward the end of the year, the Association was invited to apply for "consultative status" in the United Nations organization, and the voluminous material which such an application required called for laborious and extensive efforts of the office staff for several weeks.

New interest in the subject of an improved calendar has developed during the year in several countries where no affiliated committees exist at present. This is one of the most encouraging signs of 1952, with India, Ireland and Sweden as examples of countries that may be expected shortly to organize affiliated committees, adding strength to the world-wide scope of the International Association.

The developments in India, Ireland and Sweden have been covered in the reports from those countries. From the viewpoint of the New York office, it is sufficient to say that these developments were encouraged and supported in every possible way. The interest of Dr. Törnebohm, eminent Swedish industrialist, was awakened through a World Calendar luncheon in New York; the developments in Ireland came by way of an American college teacher who was spending a year or two in Dublin on an exchange professorship; the awakening in India dated back to an early conference between officials of The World Calendar Association and Mahatma Gandhi—a conference which took place in London twenty-one years ago, and which was reinforced by a meeting with Professor Saha in 1945 when he was in America on a government mission.

It was also a source of gratification to find that a friend of calendar reform was installed as President of the United Nations General Assembly. The 1952 presiding officer was Lester Bowles Pearson, Foreign Minister of Canada, who only a week prior to the opening of the U.N. had said in Ottawa to the Honorary Secretary of the British Section, Mr. J. A. Joyce: "Calendar reform is one of the sensible things which the world ought to be doing, but the world is not doing it because it is doing so many un-sensible things!"

Within the boundaries of the United States, promotional and educational activities have been continuous throughout the year. Printed material has included four issues of the *Journal of Calendar Reform* and a number of pamphlets designed for special uses. An "Appeal to Parliamentarians," prepared in collaboration with James Avery Joyce of the British committee, was issued in English, French, Spanish and Swedish. Service to press and radio has been zealously maintained. Material for speakers has been distributed, and several new speakers have been added to the list of those available for addresses before forums and service clubs. The most active speakers on the roster at the present time are: Edward F. Flynn of St. Paul, who specializes in Rotary Clubs; Dr. John Hedeman of Baltimore, a Kiwanis official; Mr. Allan P. Ames, a Chamber of Commerce secretary in Florida; Mr. Alfred Ogram, a retired government engineer; and Mr. Jacob McColly of the International YMCA.

Special service for educational conventions included the annual meetings of the National Council of Mathematics Teachers, the National Science Teachers Association, the Duodecimal Society of America and the National Association of Watch and Clock Collectors. Similar service has been rendered to numerous educational institutions, such as Indiana University, the University of Wyoming, Boston University, William and Mary College, San Diego State College, and many others.

Endorsements received during the year included various local service clubs, learned societies and important Canadian organizations allied with labor, industry and commerce.

In the Association's contacts with the United Nations, the basic consideration has been to move the subject of calendar reform as rapidly as possible toward legislative action in 1953 and adoption on Sunday, 1 January 1956.

CALENDAR SHIFT IN STATISTICS

*By Charles E. Armstrong
American Telephone and Telegraph Company*

ONE of the jobs of statisticians working with monthly data is to measure and remove month-to-month fluctuations in order to show trends and cycles in clearer light. This step also provides a base from which to evaluate the effects of special occurrences, as well as a more realistic jumping-off place from which to project future performance. Proper evaluation of current position and recent trends is fundamental in considering future results.

In economic series the most important monthly influences which can be measured and predicted are seasonal variation and calendar shift effect. It is the job of the statistician to evaluate and eliminate these two influences before data can be intelligently considered, analyzed, or projected into the future. This job, if well done, is a time-consuming process which, although necessary, usually adds very little to fundamental understanding of the data. Hence, any move which would simplify the statistician's job in this area would seem to be a step in the right direction.

Seasonal variation is any 12-month periodic fluctuation. Such 12-month periodicities may be caused by the round of the seasons, with the attendant normal patterns of temperature, precipitation, solar radiation and crop production, or by human customs and institutions such as holidays, religious functions, business practices, and vacations. Or, they may be caused by the fact that some months are longer than others. Seasonal movements usually can be measured satisfactorily by one or more of the standard techniques developed for the purpose. Nevertheless, in most economic data this step is only half the story. There is in addition to seasonal, the very real, and at times, bothersome, element to be considered, calendar shift effect.

Calendar shift effect is caused by the variations in our present calendar from one year to the next, and the changing incidence of the days of the week which these shifts produce. The pattern of calendar shift, for all practical purposes, repeats each 28 years. It is not included in the measurement of seasonal variation, but remains in the data after seasonal has been removed. In a great number of economic series most of the calendar shift effect is caused by the changing number of Saturdays and Sundays in the same calendar month from one year to another. These days, because of business and social practices, usually contribute different amounts to the monthly totals than do weekdays. As a result, months with five Saturdays or five Sundays tend to be consistently higher or lower than months with four. For example, in a series for which an average Saturday is equivalent to $2/3$ of an average weekday and Sunday to $1/3$, an April with 4 Saturdays, 4 Sundays and 22 weekdays includes 26 equivalent weekdays, whereas an April with 5 Saturdays, 5 Sundays and 20 weekdays contains

only 25 equivalent weekdays. The first will thus be $1/25$ or 4 per cent greater than the second in effective length.

The measurement of calendar shift effect may be based on the use of time studies or other information to determine the values of Saturdays and Sundays in terms of weekdays. Using these values, together with appropriate evaluations of holidays in terms of weekdays, the data may be converted to a per-average-weekday series, and all further study carried through on this basis. Another method for measuring and removing calendar shift effect is to apply to the monthly data a statistical process such as the one outlined in this *Journal* in the March 1951 issue. A process of this type, although applicable to most series and usually effective in its results, requires some familiarity with statistical procedures. By either method, however, adjusting for calendar shift effect usually involves a considerable amount of skill and labor. A typical calendar shift analysis requires about as much attention and effort as an average seasonal analysis. In addition, the presence of sizeable calendar shift effect in a series complicates the measurement of seasonal variation.

How, then, would the adoption of The World Calendar affect the problems of the business statistician with respect to treating monthly data? Under The World Calendar, all the factors underlying seasonal variation would still be present. The patterns of temperature, rainfall, solar radiation and crop production would be unaffected. The holiday, vacation, and religious and business customs would remain unchanged. In addition, some months would still be longer than others. Therefore, series which show seasonal variation under the present calendar would also show it under The World Calendar.

The fact that under The World Calendar the months would not all be exactly the same length would not add any special burden to the process of measuring and eliminating seasonal variation. The pattern of the length of months follows a 12-month periodicity, as do the other seasonal factors. Any process which measures the other factors would include an allowance for variations in the length of the month. Even a calendar system calling for months of identical length, such as the 13-month system, would not remove the need for evaluating seasonal variation, because all the other seasonal influences would still be present.

It is with respect to calendar shift effect, however, that the real impact of The World Calendar would be felt. There would be no shifting patterns of days of the week from one year to another. As a result the effective length of each of the twelve months would remain fixed, year in and year out. All Januaries would be 5 Sunday, 4 Saturday, 22 weekday months, all Februaries 4, 4, 22, all Marches 4, 5, 21 and so on. Calendar shift effect, as we understand it today, would cease to exist. Differences in adjacent months would be repeated every year, and would merge with other seasonal influences, to be measured and removed in the conventional way. Even the simple device of comparing each calendar month's results with results for the same month in prior years would take on a validity never before enjoyed. As a direct result, one statistical procedure would be eliminated and the work of the statistician greatly reduced.

TIME TO TURN TO A BETTER PLAN

By W. Earl Hall

*Managing Editor of the Mason City, Iowa, Globe-Gazette
(New Year's Radio Broadcast over Station KGLO)*

OFF-HAND I can't think of a more timely topic for the New Year's season than our system of measuring time. And by measuring time, I mean breaking it down into seconds, minutes, hours, days, weeks, months and years—even into centuries. In short, I plan to talk with you about that useful article known as a calendar.

Once I had high hopes that by now we'd be making use of a new calendar which by any and all tests is superior to the one currently in use. But now I'll be willing to settle for three years from now, 1 January 1956, when the first day of the year next falls on a Sunday.

You see I once had the notion (just because this new calendar—it's called The World Calendar—is so obviously better than the one which has been employed since its inauguration by Pope Gregory XIII in 1582 A.D.) that the world, under American leadership, would automatically turn to it.

But now I've wised up on the subject a little. I've been reading calendar history in my spare time. And I realize that moving into a reform like this isn't something accomplished over-night and by the turn of the wrist.

Such has been the case even in those earlier days in history when men in un-

bounded authority, like Julius Caesar or Pope Gregory, put their influence behind a calendar change. Now, of course, dictatorships are at low ebb and reforms have to be brought about under the more deliberate processes of democracy.

By taking a jaunt back over the path of history, we make the interesting discovery that the calendar of today, imperfect though it may be, is the product of a great many centuries of patient study and experiment.

Through most of the years of recorded history, it's to be noted, the prime problem of time-reckoning has been merely to make the years come out even. Both the sun and the moon have been used as anchors in this process, individually and in combination. By process of trial and error, the sun proved itself to be the more reliable.

The earliest known calendar was that of Egypt at a period more in advance of the Birth of Christ than the present day antedates that one most important event in recorded history. Curiously enough, the Egyptians had a solar calendar not too different from ours.

But the Egyptian calendar had one great shortcoming. It called for a year of exactly 365 days. That meant an error of about a quarter of a day every year, or a

full day every four years. And there was no provision for a leap year.

When you consider that this wandering calendar limped along for some 5,000 years, with priests and ordinary people successfully opposing every effort at correction or improvement, it has a tendency to make you more patient with the current reform effort which actually got under way just 118 years ago. That was in 1834.

When Julius Caesar took over in Rome he knew only the old Roman calendar, which, like most timetables of the world in that day, was based on the movements of the moon. It had originally contained 10 lunar months from March to December, but one of Julius Caesar's predecessors, Numa Pompilius, in about 673 B. C., tossed in a couple of extra lunar months, January and February.

It was that old boy, Numa Pompilius, who dreamed up the stunt of inserting a few days here and there, or even an extra month, so as to harmonize the lunar months with the cycle of the sun, thus tying an essentially lunar calendar to the seasons.

In 452 B. C., the Roman Supreme Court of 10 judges (hence known as Decemvirs) placed the months in the order they are known to us today. The authorities continued their occasional intercalations, by means of a biennial or triennial "thirteenth month" of 22 or 23 days, called Mercedonius. There wasn't any particular rhyme or reason to it. All in all, things were in a heck of a mess when Caesar happened along.

As a means of starting with what he hoped would be a clean slate, Caesar by royal proclamation produced a year containing 445 days. That was to rectify the accumulation of errors piled up under

that old Roman calendar which he had inherited.

Behind his back, his subjects referred to that elongated year—46 B. C., it was—as the "Year of Confusion." They were, of course, just running true to form. They didn't recognize improvement when they saw it; they didn't know that they were ridding themselves of a miserably inadequate calendar.

But the perfect calendar was still a long way off. Caesar wanted to start the new year on 25 December, which was the day of an ancient pagan holiday, the Saturnalia, and of the winter solstice. But people resisted that choice because a new moon was due on 1 January and somebody had told them the new moon was "lucky." Caesar had to go along with them in their desire to start the new reckoning on a traditional lunar landmark.

While the so-called Julian calendar represented a pronounced improvement over the Egyptian calendar from which it had been copied, its calculation of the year at 365.25 days represented an error which could—and did—become important on a cumulative basis over an extended period.

Since the actual year was shorter than the calendar year, the date set for Easter kept slipping backward one day every 128 years. In 1780 the error was 10 days and churchmen could see that ultimately Easter, a Spring Festival, would be occurring in mid-winter.

Here it should be pointed out that a few centuries after the advent of the Julian calendar, the birthday of Christ had been adopted throughout the civilized world as the guidepost and anchor in all calculations of time. It still is, of course—even in Russia and the Communistic countries behind the Iron Curtain, which prides

themselves on their contempt for things religious and spiritual.

As early as the 13th century such alert minds as Roger Bacon were directing attention to the need for calendar reform. In 1514 Copernicus, then only 29 years old, put in his nickel's worth at the request of the church authorities. And that was about all his advice was worth because he gave an evasive answer.

But in 1582, under the leadership of Pope Gregory XIII, a new calendar was introduced in Catholic countries. More than other segments of the world's population, the Catholic Church felt a need for as authentic a commemoration as possible of the various events incident to Christianity's birth and development.

Sheer cussedness caused Great Britain and her Protestant colonies to shy away from the Gregorian calendar, which had been recognized and adopted as a much-needed reform throughout most of the remainder of the civilized world. It wasn't until 1752—170 years after its promulgation by Pope Gregory—that the English-speaking world on orders from London fell into step.

One of the most interesting repercussions from that delayed fuse so far as America was concerned had to do with George Washington. He had to change birthdays. He had been born on 11 February under the old calendar but his birthday became 22 February under the new one, a change of 11 days.

That the opposition to the change in those days two centuries ago was just about as intelligent and well-based as opposition today was demonstrated by angry Britons in London. They proceeded on the assumption that they had been robbed of those 11 days, along with great wealth,

pleasure and opportunity. So it has always been; so it still is.

The World Calendar, now waiting to be adopted, represents the best thinking of the centuries on the subject of measuring time. Its improvement over the Gregorian calendar is substantially the same as the Gregorian calendar's superiority over the Julian calendar and the Julian's superiority over the ancient Roman calendar it supplanted.

A fact wholly lost on those who oppose calendar reform out of religious motives is that every calendar known to man, including the Gregorian now in almost universal use, is MAN-MADE. No calendar was ever handed down from on high, full-flowered. To contend otherwise is to be ridiculous.

Down through the centuries, from the beginning of recorded history, man has been engaged in a constant quest to improve the existent system for reckoning time. It's been a painfully slow and tedious project. But this significant fact remains:

Whenever people became convinced that there was a better plan than the one in vogue, they have been willing to turn to that better plan.

It's that historic fact which gives me hope in the present situation. Seventeen governments of the world have given formal approval to The World Calendar. What should cause some red faces in this country is that in that list of 17 forward-looking countries willing to embrace progress when it comes along, there isn't a single English-speaking nation. Can you imagine it?

Let us for a moment place our outmoded calendar down alongside the one which has been at our command for lo these many years:

One has unequal quarters—90, 91, 92 and 92 days; the other has equal quarters—91 days each.

One has months of irregular length; the other follows a rhythmic pattern—31-30-30 days.

One has months varying from 24 to 27 business days; in the other there are 26 business days in every month.

One has grasshopper holidays—dates never twice in succession on the same weekday; the other has weekdays and dates always agreeing, year after year.

One is needlessly complicated and costly to business; the other offers pronounced convenience to everybody and substantial economic advantages.

The 1st of January, 1956, as I've already suggested, is the logical time for the change-over from our antiquated system of time-reckoning to one which has been brought down to date. It's then that the starting date of the two calendars would coincide. That's another way of saying 1956 starts on a Sunday.

In all the years I have been advocating calendar reform I have encountered only one person with what seemed to me to be a wholly explainable opposition to *The World Calendar*. I may have lost his friendship. If so, I'm sorry.

And who was he? He's a calendar manufacturer. His fear is that if the perpetual calendar were adopted, the public wouldn't feel required to take on a new calendar every year. And that, I can see, would be sort of bad for him.

But this friend, I think you'll agree, is in a class by himself. He doesn't speak for many others. And, knowing him as I do, I feel quite confident that he could roll with the punch and come up with some new idea to save his business.

As a matter of fact, it is interesting to find that many calendar manufacturers—including such familiar names as Brown-Bigelow and Osborne—are definitely favorable to *The World Calendar*. They argue that a perpetual calendar would merely mean that their product would have greater permanence and would therefore be of higher artistic quality. Instead of publishing ephemeral calendars in paper and cardboard, they would turn their hand to bronze and handicraft products of highly superior quality. Calendars would have the artistic merit of clocks, and be permanent decorative factors in homes and offices.

What's far more important is that *The World Calendar* would bring large-scale benefits not only to American business but to every individual American. Just to mention one little item, wouldn't it be nice to have your birthday, Christmas, New Year's and the Fourth of July falling on the same day of the week from now on?

Some folks are inclined to blame our remote ancestors for leaving us with a calendar as irregular as the one we have. This does not seem to me a proper position to take. The system which Caesar gave us and which Gregory adjusted in 1582, was good enough for the conditions then existing. The Julian calendar was much better than its predecessors.

It is not for us, in this era of split seconds, of airplanes travelling faster than sound, of instant international communication, to ask why those who lived in days of slower going did not perfect the calendar. Surely this is our task, not theirs.

The 1st of January 1956 can be made a blessed date in American history if enough of us concern ourselves about this important matter.

RADIO PLAY BY SIXTH GRADERS

Pupils of the Sixth Grade at the Wendell Phillips School in Sunnyside, Washington, recently presented an original radio playlet on the subject of "The Calendar," over their local station. The presentation was directed by their teacher, Esther Vice. Music for the opening and closing chorus was composed by the pupils themselves under the direction of Helen Newcomer.

OPENING CHORUS, by the entire class:

Thirty days hath September
April, June and November.
All the rest have thirty-one
Save February alone—
Twenty-eight is all its score
'Til Leap Year gives it one day more.

ANNOUNCER: Good morning, friends. We are in the classroom of Esther Vice's sixth grade at Wendell Phillips School. The pupils have been looking over the calendar, and asking questions about it. Here are a few of their questions:

Why do we have Leap Year?
Why do the months have different numbers of days?
Why are there seven days in a week?
Why do we have seasons?
How did man first measure time?
Where did the calendar get its name?
Why does Christmas come on a different weekday each year?
Where did the months and weekdays get their names?
How long have people used the present kind of calendar?
Could this calendar be improved?

Some of these questions are pretty hard to answer. So the pupils have been studying the history of the calendar to find out the right answers. Let's begin with the question, "How did man first measure time?" Barbara Brayton will tell us about it.

BARBARA: Probably the first unit of time that primitive man noticed was the day. It was easy to notice the rising and setting of the sun. To make a record of the days was difficult, since he could not read or write and had no numbers. So, if a man wanted to show that he would meet someone so many days afterward, he would keep account of the days by driving sticks into the ground, or by tying knots in a rope. . . . The next unit of measure was the moon. Man noticed that it made a complete cycle of new moon to full moon, to new moon again. Then man had two units, the day and the moon, or month, as it is now called. . . . Next, as man began to till the ground, he noticed the return of the seasons, caused by the earth's journey around the sun, so now he had a longer unit of measure. He found that the sun had the same

position in the sky that it had occupied a time before. He then began to mark off the days between these times.

ANNOUNCER: One of the earliest records of a calendar is found in ancient Babylon. Sam Wines will tell about this calendar.

SAM: The Babylonians lived in the Tigris and Euphrates Valley in what is now Iraq. They were good scientists and their calendar was quite scientific. It was a moon calendar. But 12 moon months make only 354 days. So to keep even with the sun year of 365 days, the Babylonians added an extra month about every three years. . . . The Babylonians get credit for naming the days of the week after the sun, the moon, and the five planets which were known at that time.

ANNOUNCER: Another old calendar is the Jewish or Hebrew calendar. Susan Hansen will tell about this.

SUSAN: The Jews inherited the calendar of the Babylonians. They used this lunar, or moon calendar, but added a month to the year at seven different times in 19 years to keep with the sun year. The new country of Israel uses this calendar. The Jewish year is 5712, dated from the creation of the world.

ANNOUNCER: Another calendar of ancient days which is still in use is the Mohammedan calendar. Ralph Brown will describe it for us.

RALPH: The Mohammedans, or Moslems, use a lunar calendar and do not pay any attention to the sun or the seasons. Since they do not try to keep in step with the sun year, their calendar runs faster than ours, because the 12 moon months add up to only 354 days. The Moslems begin with the year of Mohammed's flight from Mecca, and their calendar says it is the year 1371.

ANNOUNCER: Very great scientists of ancient times were the Egyptians. Lila Plith will tell about their calendars.

LILA: The Egyptians developed a calendar based on the annual floods in the Nile River, which was so important to them. They began their new year with the time the flood began. They noticed that at the same time this happened, the Dog Star, Sirius, the brightest star in the sky, returned again into view. They thought the flooding of the Nile and the rising of this star were the work of the river god and they held a great celebration at this time. . . . The Egyptian calendar had 12 thirty-day months. This makes only 360 days, so they added five holidays at the end of each year to keep in step with the sun. They divided the months into 10-day periods.

ANNOUNCER: The calendar nearest ours in make-up is the Julian calendar which was developed by Julius Caesar. Robert Johnson will discuss the Roman calendars.

ROBERT: The early Romans had a 10-month calendar starting with the beginning of spring, and the words September, October, November, and December mean 7, 8, 9, and 10, as they were the last months in the Roman year. After the end of December, they just ignored the next sixty days of cold and darkness, starting their calendar year again in March. . . . Later two more months, January and February, were added, but the New Year still began in March. . . . When Julius Caesar became emperor he saw the calendar did not fit into the year and he asked Sosigenes, a Greek scientist he had met in Egypt, to help make it right. These two worked out the calendar with

leap year, adding a day every four years. This was called the Julian calendar. The seventh month was named July after Julius Caesar. Instead of weeks, the Romans divided the months into periods of time called Calends, Nones, and Ides. That is where we get the name, "Calendar."

ANNOUNCER: Another change was made by the Emperor Constantine. Joey Dolan, will you tell what the change was?

JOEY: In A.D. 325 Constantine, the Roman Emperor, decreed that Easter should be celebrated on the first Sunday after the first full moon, after the beginning of spring, on 21 March. He also established the seven days of the week as they are now.

ANNOUNCER: Now we come to our calendar, the Gregorian, which will be described by Janet Morrow and David Short.

JANET: The calendar of Constantine was used until the year 1582. In that year Pope Gregory noticed that the calendar read only 11 March when it was time for the equinox and it should have read 21 March. This difference came about because the year is not exactly $365\frac{1}{4}$ days long, but is 11 minutes less than that. In 1,200 years this had added up to 10 whole days. The calendar was out of step. Pope Gregory made a decree to correct the error. He ruled that 10 days should be dropped from the calendar. He said that Thursday, 4 October 1582, should be followed by Friday, 15 October 1582. He also ruled that every year divisible by 4 should be a leap year, except the century years, which should be divisible by 400 to be a leap year. This way the calendar year is only 26 seconds too long and it will not be a day off for about 3,000 years. Pope Gregory also made the year begin on 1 January.

DAVID: Most Catholic countries adopted this calendar in 1582. But England and her colonies did not accept it until 1752. People in America went to sleep on 2 September 1752, and awakened the next day to find it was 14 September 1752. Many people didn't like the change, and they shouted, "Give us back our 11 days!" In some places there were riots. But the Gregorian calendar stayed.

ANNOUNCER: George Washington's birthday was 11 February 1732, but we celebrate it on 22 February because of the calendar change. We have had our basic calendar for nearly 2,000 years, and it has not been changed at all for nearly 200 years. Many people are asking, "Does our calendar keep up with the times?" We now have very fast means of transportation and travel. The world is getting smaller because, instead of measuring distances by miles, we can measure by the hours it takes our fast planes to reach a city or country. Let us take a look at the calendar with a critical eye. How quickly can you answer these questions?

What weekday does your birthday come on this year?

Do you know on what day of the week you were born?

What day of the week will Christmas come on this year?

Easter comes on 13 April this year. What will be the date of Easter next year?

What date is Labor Day this year and on what date will school begin?

Election Day comes on the first Tuesday after the first Monday in November. But what will be the date?

Could you answer all the questions right away? No, you would have to consult the calendar. Shirley Vaughn and Roger Leach will discuss what's wrong with our calendar.

ROGER: The dates come on different weekdays every year. It is impossible to remember which dates fall on which days. It is also hard to plan for future events. . . . The reason for this irregularity is that a seven-day week does not fit exactly into 365 days but makes 52 weeks with one day left over. This makes the next year start on a new weekday, and makes the whole year shift ahead.

SHIRLEY: The months do not have an equal number of working days and cannot be compared with other months or with the same month of the year before. March has five Sundays this year, and five Sundays next year, but the following year it will have only four Sundays and five Mondays.

ROGER: Holidays move through the week, sometimes making a long week-end. When they come on Friday or Monday, many people like this. But when the holidays come on Tuesday or Thursday they break into the week. This is especially hard on business and labor.

SHIRLEY: The half-years are unequal. The quarter-years are unequal, having 90, 91, 92 and 92 days.

ANNOUNCER: These are a few of the things that make the calendar inconvenient and time-taking. People have suggested changing it for many years. One plan is The World Calendar. This plan is approved by many educational, business, religious and science groups. Deana Stice, will you tell about The World Calendar?

DEANA: The World Calendar has 12 months and equal quarters, each quarter having 91 days. A quarter has one 31-day month and two 30-day months. Each quarter begins on Sunday and ends on Saturday. One quarter is exactly like another. Each month has 26 weekdays. The year begins on 1 January, Sunday, and ends on 30 December, Saturday. There are 364 days in The World Calendar. The 365th day is placed after Saturday, 30 December, and is called *Worldsday*. This would be a holiday the world over and people would celebrate world unity. . . . In leap year a day is added after 30 June and is called *Leapyear Day*. This would also be a holiday. The year would always begin on Sunday and end on Saturday. The same calendar could be used every year. It would be a perpetual calendar.

ANNOUNCER: Perhaps you are asking this question: Are we really going to have a new calendar? If so, when? Dick Carlson will answer this question.

DICK: The plan of The World Calendar Association is: To have it put on the agenda of the United Nations General Assembly this year. To have it adopted by the nations next year. And to have it go into effect on 1 January 1956, because that year 1 January comes on a Sunday.

ANNOUNCER: There are many different calendars used throughout the world today. But the nations have all adopted Standard Time. So perhaps they will also adopt The World Calendar. . . . The United States will approve this calendar when enough people *want* The World Calendar and *ask* for its adoption. . . . This concludes the *Story of Our Calendar*, as presented by the pupils of Wendell Phillips School.

CURRENT PRESS COMMENT

Good for Everybody

Waterbury (Conn.) Republican

BRISK efforts are afoot to reform the calendar. And it wouldn't be surprising if one of these days Miss Elisabeth Achelis and her World Calendar Association might succeed in doing what others have failed to—systematize the calendar. Right now this group is aiming at 1 January 1956 as the date for adoption.

There are 17 countries currently in favor of The World Calendar. A swing by a few more might be enough to make changing the calendar a matter of international importance. Actually it would be a good thing for the entire civilized world if it got involved in a serious discussion of modernizing the calendar. This would take men's minds off war and the possibility of wiping out civilization by means of lethal bombs. We're in favor of a prolonged debate on the subject.

Optimists at Work

Denver (Colo.) Post

THERE are two kinds of people in the world—those who sometimes get discouraged and those who advocate calendar revision. Since prehistoric times, the world has always had people who have been interested in improving man's method of keeping track of his days, weeks, months and years—which has always been something of a mess, and still is.

Year in and year out, people keep right on plugging for a better calendar. They work against a human apathy, although everyone admits they are right and that a more sensible system should be adopted. You might think they would throw up their hands in disgust; but calendar reformers

aren't that way: they know they are right and will win out eventually.

Banded together in The World Calendar Association, they would like to have their proposals go into effect 1 January 1956, when the changeover could be made without confusion. We hope they achieve their objective. But public apathy and inertia toward such a simple and worthwhile change is something almost beyond belief. Of one thing we are sure. Temporary setbacks mean nothing to those who think in terms of the timelessness of calendar systems.

Laudable Perseverance

Schenectady (N. Y.) Gazette

SOME crusading organizations give up easily. But for patience and persistence you have to hand it to The World Calendar Association.

This group has been trying for a long time to get the United States government to join in the movement for adoption of The World Calendar, a revision which is balanced, regular, perpetual, easily understood and readily remembered, as compared to the present calendar.

The Association is currently aiming at approval of their plan by the United Nations in 1952, with a view to installing the new system internationally in 1956.

No doubt the thing that keeps the Association from being discouraged is that while our own government has not yet said "Okay," seventeen other nations have given their approval, and in our country numerous civilian bodies, such as educational, scientific and industrial organizations have backed the proposal. If you're an impatient sort, the movement seems to be going too slowly. But the folks in the Association have confidence, and perhaps with reason, that eventually their long struggle will pay off.

EXCERPTS AND REVIEWS

Basic Dating Confusions

By W. L. HEINRICH

A RECENT editorial in *The Controller* raised the question as to the reasons why we call our years from the birth of Christ, but do not start our new year on Christmas Day. As Controller for Brown and Bigelow, the world's largest calendar house, I am taking the liberty of answering this question.

The Christian era theoretically begins with the birth of Jesus, but the calendar year begins 1 January instead of 25 December, the traditional birthday of Jesus. This anomalous situation is due to the fact that the Christian era was not calculated until the sixth century and was not generally accepted in Christendom until about the year 1000. Consequently the beginning of the era was projected into the past.

The Romans reckoned time from the legendary date of the founding of Rome. The starting point in Roman chronology was *Anno Urbis Conditae* (A.U.C.), which literally means "in the year of the founding of the city."

About 532 A.D., after Christianity had become dominant in the old Roman Empire, a learned monk of Rome named Dionysius Exiguus worked out a Christian system of chronology to take the place of the then prevalent pagan system. He concluded that Jesus was born 25 December, 753 A.U.C. Prior to his time there had been little uniformity in the date observed as the Nativity; it was observed on different days in different parts of the Christian world.

Logically Dionysius should have begun the new era with 25 December, but he decided to begin it with 1 January because he wanted to leave the Roman year and months intact, so as not to upset and confuse an established and accepted system. Accordingly he began the Christian era with the first day of January in 754 A.U.C. His sys-

tem was adopted gradually, and did not completely supplant the old method until about 1000 A.D.

Germany was the first nation to adopt the new system. In 879 A.D. Emperor Charles III of Germany proclaimed "Anno Domini—in the year of our Lord," and after several centuries this became the accepted mode of designating the year. Modern scholars have shown that Dionysius was off several years in fixing the date of the birth of Jesus, and consequently we have the anomalous situation of Christ having been born at least four or five years before the date beginning the era that bears His name.

After the Dionysian calendar and era had become firmly established, with 25 December as Christmas, it became impractical to change it—because a change would upset the entire system of historical chronology. As a matter of fact, the Christian world is not yet in agreement even on the traditional date of the birth of Jesus.

The epoch beginning with the birth of Jesus is often called the "Common Era," particularly by Orthodox Jews, who are compelled to recognize it for practical purposes but who object to referring to it as the Christian Era on the ground that such notice might be interpreted as a recognition of its founder. Strict Jewish writers who use the Christian dates seldom add the letters A.D. Of course the Jewish calendar reckons time from 3761 B.C., the traditional date of creation as established in the fourth century A.D. by Hillel II.

Back to the Kalends

From O. J. MITCHELL, *Los Angeles*

OUR calendars, which look mighty bright and modern as we hang them up on New Year's Day, are really not so new after all. The idea of the calendar started ever so long ago in Rome. It was the custom there

ve the first day of the month announced the people. This was done in two ways: e first was to have heralds go about the y crying that the first day of the month d arrived. Another was to put up plac- ds or printed signs on the city walls. ese signs were called "kalends," mean- g "I proclaim."

From this old custom and word we get r "calendar." We have added all the days e month to our placards; we hang them ur homes instead of the city walls. But e idea is still—to tell us what day it is.

Time, Rhythm of Universe

By DR. ALBERT L. SCHREINER

(New York City)

F we define Time as the rhythm of the niverse, then we are indeed posed with a upendous fact, for our finite minds cannot lly appraise the rhythms of the infinite.

However, the rhythm of day and night d the rhythm of the recurring seasons are sily appreciated and give us the charted ord of the flight of time which we know a calendar. It is therefore highly impor- nt that the calendar formula be just as ract as possible and that its exactness ould not merely be carried on from year year but be perpetual.

We have this exact perpetual quality in e World Calendar. As a slogan of The orld Calendar Association aptly puts it. Not for a year but for centuries."

Since the creation of man, the rhythm of ay and night, the rhythm of the seasons, e rhythm of the rising and setting sun, the ythm of the phases of the moon, and the ythm of the tides have intrigued him. ey have shown him the necessity for roperly and simply recording the flight of me by charting these rhythms. Hence the ed for a World Calendar that is ordered d rhythmic in arrangement and usage.

The question of rhythm has always been timate to man. Since his creation the ythmic heart beat has been handed from other to child in an unbroken chain.

Thought has rhythm too. You come out of

a theatre humming a tune whose rhythm was doubtless in accord with the rhythm of your thought, but the next morning you cannot recall it. However, memory is periodic and rhythmic too, and some time during the day while you are making a date by your World Calendar you find yourself humming the tune again.

We all know how easy it is to recall or remember poetry and jingles because of their rhythm.

Some musicians have perfect rhythm it is said. The composer of the once popular song, "I Got Rhythm," certainly took unto himself an attribute that placed him in harmony with time, the rhythm of the universe. Perhaps it is perfect rhythm which keeps the planets in their orbits from day to day and year to year throughout the ages.

In the world of music there are the regular rhythmic and harmonious chords of the scale—the tonic, the sub-dominant, the dominant and the seventh chord, with the latter invariably reverting to the tonic chord. All is in recurrent symphonic rhythm. The seventh chord is comparable to the Worldsday in The World Calendar that invariably reverts to the first day, Sunday 1 January, of every new year. Thus The World Calendar with its Worldsday becomes a world symphony of rhythm in Time.

It has been said that thought may be due to the rhythmic release of some radio-active electronic element in the brain. This could give us telepathy, and thus telepathy might well be the ultimate form of communicating thought from one mind to another.

Dumas père, the great French author, doubtless believed this possible, for in his novel, "The Corsican Brothers," the knowledge of the death of the one twin brother is instantly known to the other twin brother through the medium of telepathy.

The rhythm of the thoughts by the mind which would make telepathy possible, after all is said and done, would still be the rhythm of a finite mind. The infinite mind would still hold the mystery of the stupendous rhythm governed by time, the rhythm of the universe, and thus the rhythm of the calendar becomes signally important.

FROM THE MAIL BAG

Promotion of The World Calendar is a most worthwhile effort.—James R. Browning, Executive Asst. to Attorney General, Washington, D. C.

My interest in calendar reform centers, as a statistician, in obtaining international agreement regarding holidays. Comparability of statistics, as between different countries, is hampered by the varying incidence of holidays. Perhaps it is better to get The World Calendar adopted first, and then take the next step later.—Conrad Ankarcrone, Swedish Board of Trade, Stockholm.

Ultimate success of this movement is nearer than you think.—Earl T. Strickler, Secy., Assn. of Watch and Clock Collectors, Columbia, Pa.

You have my fervent best wishes for the success of your efforts.—Jose H. Montalvan, Pres., National University of Nicaragua, Managua.

Every science teacher should use The World Calendar as part of a unit of work in a general science course. Through this method, we can make sure that the next generation understands calendar reform and is favorably disposed toward it.—Prof. J. M. Straus, Los Angeles.

You may include my name as one of the supporters of your splendid work, in which you deserve to succeed. Being inspired, like yourself, to do something in the national interest, I am also chairman of the Executive Council of the Decimal Association in England.—Harry Allcock, Chartered Mechanical and Electrical Engineer, Altringham, England.

Our workers agree that The World Calendar is a wonderful idea and a great service to humanity.—Claire San Giovanni, Ridgefield, Conn.

While calendar reform is under discussion, why not change the names of September, October, November and December—

leftovers from the Roman calendar which tagged them as the seventh, eighth, ninth and tenth months of the year? One of my correspondents calls them the "ember days," on the ground that embers suggest a dying fire. But the "ember days" of the Episcopal Church derive their name from the Anglo-Saxon "running around," meaning merely a recurring observance.—Prof. Robert Withington, Northampton, Mass.

There can be no doubt that The World Calendar is the best plan ever offered for correcting the deficiencies of the present system.—Zinro Maeyama, Tokyo Observatory, Mitaka, Japan.

Advocates of The World Calendar are doing their utmost in the Philippines to assist the movement toward eventual success.—Ramon Caro, Manila.

This reform will be of special benefit to everybody.—J. M. Naab, Vice President, Leslie Co., Lyndhurst, N. J.

I have never lost an opportunity to advocate the calendar reform so ably expounded by The World Calendar Association.—Leonora Cohen, O.B.E., Leeds, England.

Although there will be objections, The World Calendar seems obviously desirable.—Price A. Patton, Bus. Engineer, Chicago.

Further progress toward calendar reform in Australia now depends upon a campaign on such a scale that it will convince the Government of a popular demand for The World Calendar. The committee of the National Research Council is convinced that this particular calendar should be universally adopted.—Prof. H. J. M. Abraham, Commonwealth Observatory, Canberra.

Calendar reform will be a boon to retail business, which depends greatly today upon comparative figures. With our present hodgepodge time system, it is frequently a nightmare to get adequate comparisons.—Elmer Smith, Piedmont, Cal.

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EDITORIAL PARAGRAPHS

Why should we have to follow a cumbersome system of keeping track of time as devised by a couple of guys named Jules and Gus, who lived some 1,900 years ago?—*parta (Ill.) News*.

Our present calendar is neither sacred nor immutable. It is man-made and can be changed at any time by general agreement. Canada should press for consideration of the subject by the UN this year.—*Ottawa (Canada) Citizen*.

Pioneer of modern calendar reform is Father Marco Mastrofini, who published at Rome in 1834 a study called "Advantages of a Perpetual Gregorian Calendar." The idea of a symmetrical year of 52 weeks is his.—*Union City (N.J.) Sign*.

Advantages of such a scientifically designed calendar are too obvious to require argument, and the simplicity of the revision will make its adoption very easy.—*Regent News, Point-a-Terre, Trinidad, B.W.I.*

You may experience a calendar change about three years hence if The World Calendar Association wins its fight. Seventeen countries have expressed willingness to adopt the plan.—*Miami Herald*.

Approval and acceptance of The World Calendar will create order and harmony within our time-system. All nations and peoples can cooperate in this unifying action.—*Times of Brazil, Sao Paulo*.

This whole World Calendar plan is so simple and straightforward that people generally will hardly know the difference—except that all their calendar calculations will be made easier.—*Quincy (Ill.) Herald-Examiner*.

When holidays fall on a Thursday, as Christmas and New Year's did this winter, advocates of calendar reform have a convincing argument right at hand. Holidays that split a business week are very annoy-

ing and costly. Stabilized holidays would be advantageous to everybody. — *Salamanca (N. Y.) Republican-Press*.

It is regrettable that the United Nations has again postponed action on our calendar reform, because there are clear reasons why an improvement of the calendar would be highly beneficial to all of us.—*Le Nouvel Alsacien, Strassbourg*.

In many ways the present calendar presents grave inconveniences. It should be revised, adjusted and simplified.—*Toulouse Vie du Sud-Ouest*.

People would like to see the adoption of a new world-wide calendar in 1956, when the change can be made smoothly.—*San Francisco Chronicle*.

It is fantastic that, in the middle of the 20th century, we are using a calendar which is 2,000 years old: we should bring our methods of time measurement up to date.—*Luton (England) Telegraph*.

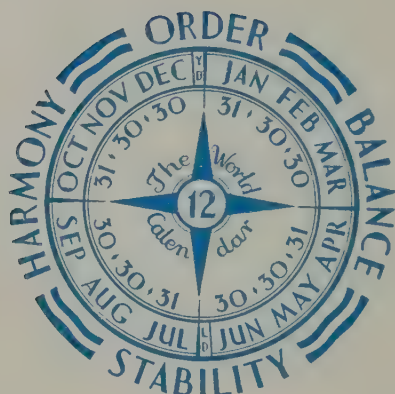
Reform of the calendar is more than due. The present system can be an accountant's nightmare. The World Calendar is now the dominant scheme for simplifying and rationalizing our dating method.—*Los Angeles Times*.

People of today need a new calendar, a stream-lined calendar for a stream-lined world.—*Butte (Mont.) Post*.

Our present calendar has served the world, with minor changes, for nearly 2,000 years. In the opinion of the Astronomer Royal, we have all been wasting our time since then in intricate calculations of our days. Many advantages are claimed for his new World Calendar.—*London Daily Mail*.

After years of study an improved calendar has been agreed upon by many nations.—*Willmar (Minn.) Tribune*.

The World Calendar Association, Inc., will gratefully receive contributions for furthering its work. Such contributions are tax exempt under Federal and New York State Income Tax laws.



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Journal of
CALENDAR
REFORM

CLOSER TIES with UNITED NATIONS

E June 1953

THE WORLD CALENDAR

1ST
QUARTER

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

2ND
QUARTER

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

3RD
QUARTER

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
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29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

4TH
QUARTER

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
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Worldsday, (a World Holiday), W or 31 December (365th day), follows 30 December every year.
The Leapyear Day, (another World Holiday), W or 31 June follows 30 June in leap years.

In this Improved Calendar:

- Every year is the same.
- The quarters are equal: each quarter has exactly 91 days, 13 weeks or 3 months; the four quarters are identical in form.
- Each month has 26 weekdays, plus Sundays.
- Each year begins on Sunday, 1 January; each working year begins on Monday, 2 January.
- Each quarter begins on Sunday, ends on Saturday.
- The calendar is stabilized and perpetual, by ending the year with a 365th day that follows 30 December each year, called Worldsday dated "W" or 31 December, a year-end world holiday. Leap-year day is similarly added at the end of the second quarter, called Leapyear Day dated "W" or 31 June, another world holiday in leap years.



ONE WORLD CALENDAR FOR ONE WORLD

VOL. XXIII

JUNE 1953

No. 2

ON 6 April the United Nations officially registered The World Calendar Association as one of the non-governmental organizations affiliated with its Economic and Social Council (ECOSOC). This formal recognition is a new and important step in the international pathway leading to decisive action for an improved calendar.

The precise significance of this development requires a brief excursion into current history. It will be recalled that one of the most unusual features of the United Nations Charter (which starts "We the peoples of the United Nations") was the special provision for participation in its work by certain selected non-governmental organizations (known as NGOs), enjoying consultative status with the UN.

"These international non-governmental organizations," says Lyman White, until recently the director of this activity, "are properly a part of the United Nations operation. They have made a significant impact on international life, an impact which will surely be greater in the future."

At the UN, it is the Economic and Social Council which specifically implements the consultative set-up and approves all applications for official status. Each organization has to pass a severe test, for the statutes which govern its consultative arrangements with the UN clearly specify that such arrangements "are to be made on the one hand for the purpose of enabling the Council to secure expert information and advice from groups having special competence in their field, and on the other hand to enable organizations which represent important elements of public opinion to express their views." The World Calendar Association International has competently met every requirement and test, and has clearly demonstrated that

a new calendar is not only a much-needed improvement but is a definite means for understanding and unity among peoples.

A member of the Secretariat recently wrote: "Today it is granted by all serious observers that if there is to be peace, the world must develop an international mind, a mind which fully appreciates the independence of our world; and that if the UN is to succeed it needs behind it the wholehearted support of the peoples of the world . . . A large measure of that basic understanding and necessary support is to be found in the efforts of the NGOs, which crossing international frontiers are the channels through which citizens in different countries unite to promote their mutual interests. We find these NGOs acting as agents of international understanding, as molders of public opinion, and as pressure groups both on national and international levels."

Thus far, the most intensive developments of the NGO principle within the UN have been the activities of two bodies which have also been highly influential in their advocacy of calendar reform: the International Chamber of Commerce which originally brought the calendar question up for inter-governmental action in 1921, and the International Standardization Organization which is now engaged in an intensive study of calendar matters—using the term "*standardization* of the calendar" in preference to the words "reform" or "revision."

In connection with the approval of The World Calendar Association for a place on the register of cooperating non-governmental organizations, it was noted emphatically that: "The NGOs are frequently pioneers—they are the first to recognize a need, and the first to do something about it, either in study and research or in a program of action . . . These private groups pioneer ahead of public opinion, and so are working to meet a need not yet universally recognized; their aims frequently become commonly accepted."

Since its organization the Association has dedicated its activities toward the objectives as outlined by the member of the Secretariat: the UN first recognized this in 1946. The World Calendar has come before that body frequently since that time. The position of the Association has always been that the UN should be zealous to complete an important piece of *unfinished business*, namely give the world an improved calendar at the earliest available adoption date—Sunday, 1 January 1956.

Journal of

CALENDAR REFORM

JUNE 1953

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Charles D. Morris, Editor

Linda Halsted, Associate Editor

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FOR YOUNGER READERS

From the Young Catholic Messenger, Dayton, Ohio

TO UNDERSTAND all the calendar mix-ups, you must realize why men wanted a calendar in the first place. Ages ago men knew that season followed season in a regular order—spring, summer, autumn, winter. Naturally they wanted to be warned of colder days ahead. And they wanted to know when to plant crops. So there was born the idea of measuring the cycle of the seasons, that is, one full year.

At first, men did this by counting 12 full moons to a year. They soon discovered, however, that such a year was shorter than the complete course of the seasons. And so they inserted an extra month about every four years.

The first to make this kind of calendar were probably the Babylonians. The early Egyptians, Greeks, Romans, and Semitic people followed suit. Today the Jews and Mohammedans still use a lunar calendar. And our own feast of Easter is determined by rules derived from it.

Actually the cycle of the seasons depends, not on the moon, but on the position of the earth in regard to the sun. A complete cycle occurs only when the earth has made a full journey around the sun and returned to the same point in its orbit. And that is how we measure a year. But how about the days that make up the year? How are they measured? Your kitchen clock, if it is accurate, will have ticked off 24 hours only when the earth has made a full revolution on its axis.

When you try to find the number of days in a year, you come to the source of many a mix-up. For in its journey around the sun, the earth revolves on its axis about $365\frac{1}{4}$ times. It is this one-fourth of a day that has caused calendar makers trouble for centuries.

About 47 B.C. Julius Caesar was having calendar trouble in Rome. Spring, it seems, was arriving in the summer months, something no good emperor would tolerate. So Julius did away with the faulty "moon" calendar and adopted a plan similar to the one used by the Egyptians. There was, however, one difference. Caesar measured the year as $365\frac{1}{4}$ days. To take care of the additional six hours, an extra day was added every fourth year.

Time passed smoothly enough for several centuries. But emperors do make mistakes, and 1,600 years later things were happening almost two weeks ahead of schedule!

Wherein had the mighty Caesar erred? He had set the year at exactly $365\frac{1}{4}$ days. Actually it is about 11 minutes shorter than that. Not much of a mistake, of course, but in the course of centuries minutes can mount up to hours and hours to days. Soon you find Easter arriving earlier than it should!

And that was why Pope Gregory XIII ordered a new calendar made. Adopted by Catholic countries in 1582, it omits three leap years every four centuries. Century years—such as 1900—not divisible by 400 are not counted as leap years.

One other big change was made. Ten days were dropped to get things back on schedule! For a long time non-Catholic countries refused to accept the calendar of Pope Gregory. By the time England and its colonies adopted it, the time error had increased and 11 days had to be dropped.

Could our present calendar be made more simple? The World Calendar Association thinks so. Its plan, now approved by 17 countries, divides the year into four equal quarters. The first month of each quarter would have 31 days, the other two 30 days. The present 31 December would become "W December," a world holiday. The day added for leap year would become "W June" (31 June), possibly another world holiday. Every date would fall on the same day of the week each year; Christmas, for example, would always be on Monday. Right now The World Calendar Association is working to have this calendar adopted on 1 January 1956, when the change could be made smoothly. Will it succeed? Only time—Gregorian time, that is—will tell.

PROFILES FROM BRITAIN

By Harold Watkins

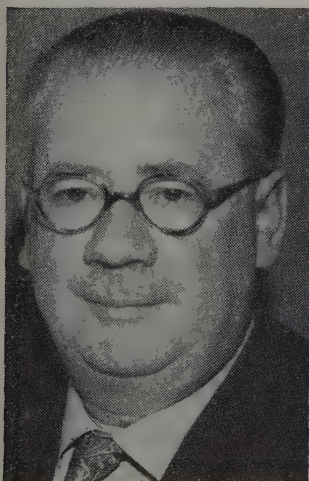
AS I write these words in London on a sparkling May morning, just a year has passed since the British Section of The World Calendar Association was launched at a historic first meeting in the House of Lords. The Committee of Twelve, formed at that time, has accomplished a good deal of effective work in the intervening period, and has supplemented its membership with an Advisory Council and a roster of officers whose ambitious plans for future activities aim at legislative action on an international level without delay.

The Anniversary meeting of our British Section was held in a committee room of the House of Commons on 5 May—and was notable for a brilliant half-hour address by the buoyant Mr. Peter Free-

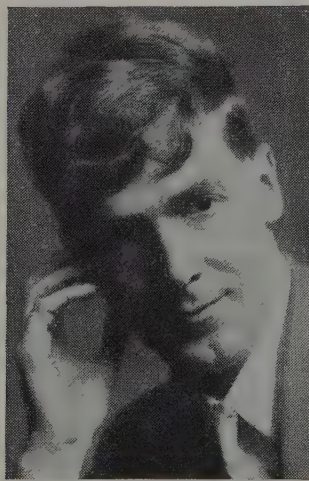
man, M.P., who reported enthusiastically on recent calendar reform developments in India. "We are looking to India," he said, to help us get action from the U.N. Assembly this fall. Its delegation is in a particularly strong position to bring up the matter."

The British Section is fortunate in the calibre of its leadership. Advocates of calendar reform everywhere will be interested in a brief picture of these men and their background. They include members of both houses of Parliament, together with outstanding representatives of British business, professional life, education and the arts.

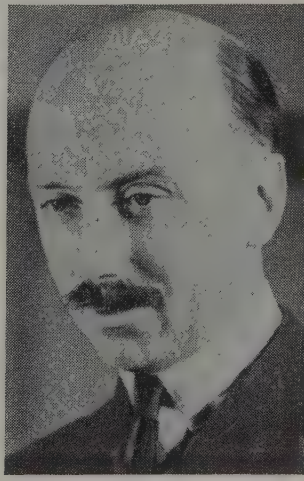
Mr. Freeman, for example, is the parliamentary representative of the city of Newport, on the edge of the Welsh coal



Lord Crook



Professor Hogben



Sir Adrian Boulton

fields. His interest in India is long-standing, for he was one of the early advocates of independence for India and for many years was Chairman of the India League. His book, *Our Duty to India*, was a notable success and has had a wide readership not only in England but also in the land of Gandhi and Nehru. He first went to Parliament from a Welsh constituency 33 years ago, and most of that time he has also been a member of the Cardiff City Council and a spokesman for Wales both at home and in London. As a youngster he was the Welsh champion at tennis; today at 63 he still plays a good game, ascribing his fitness and exuberance to a lifelong vegetarian diet.

No less fervent in his advocacy of calendar reform is another M.P., Isaac James Pitman, grandson of the Sir Isaac Pitman who developed the modern system of shorthand and named it "stenography." Prior to Sir Isaac's time, there had been many attempts to perfect a method of "fast writing" (such as the Tiro system used in Rome in the days of Cicero, and the Shelton system in which the famous diary of Samuel Pepys was kept) but the phonetic system developed by Pitman was so far superior that it marked a new era in court reporting and business dictation. The Pitman publishing firm is still in existence, and does a world-wide traffic in business publications and textbooks. I. J. Pitman is its head; he is also a director of two great British mercantile enterprises—the Boots pharmacy chain and the famous Bovril, Limited. On the government side, he was for some years a director of the Bank of England and also of Organisation and Methods to the British Treasury. In contrast to these strictly business affairs, he is a Governor

of the officially-sponsored British Film Institute.

Like Lord Merthyr, Honorary Chairman of the British Section, Mr. Pitman is a product of Eton and Oxford, where he had a notable career in sports, winning his "blue" in Rugby and on the Track. He is also a proficient skier and at one time held a scholastic boxing championship. Besides his advocacy of calendar reform, he is widely known as a proponent of simplified spelling.

In the House of Lords, Baron Merthyr of Senghenydd at 52 has long been the leading parliamentary supporter of the movement for a new calendar, ably flanked in the Upper House by Lord Crook and Lord Mathers. Merthyr's family name is Lewis, and he is the third baron of his line. He is a Welshman whose wide interests in public service range from forestry to military matters. He is a lawyer by profession and a deputy speaker of the House of Lords. One of his distinctions is the "T.D.," a decoration granted for long and distinguished service with the British Territorial Army. A quotation from one of Lord Merthyr's speeches in Parliament is frequently used by advocates of calendar revision as a general text for their persuasive activities: "If the calendar is reformed, it will be of some advantage, direct or indirect, to every man, woman and child in the civilized world."

Lord Crook (Reginald Douglas Crook) is chairman of the National Dock Labor Board, a post for which he prepared himself by 20 years as an administrator of labor matters and Poor Law. He is one of the oldest members of the National Whitley Council for Civil Service, which has charge of the wages and salaries of

half a million civil servants. His particular interest in calendar revision came about through his connection with the United Nations, where he served as a member of the British delegation about 1950, a member of the U.N. Administrative Tribunal in 1951, and its vice-chairman in 1952.

Lord Mathers, who received a peerage in 1951, started life as a railway clerk in Scotland when he was only 13 years old. From 1908 he was active in the trade union movement, and eventually was sent to the House of Commons from Edinburgh. His important offices in recent years have included a stretch as Comptroller to His Majesty's Household and a period of service with the administration for India.

There is a great variety of viewpoint among the various members of the Advisory Council. This is refreshing and enlightening. Calendar reform appeals in slightly different ways to the scientist, the economist, the professional man, the legislator. A man like Lord Crook, with a background of labor relations and the U.N., sees the problem from a rather unusual angle. He is impressed no doubt with the fact that in the field of economics there has been a change as absolute and comprehensive as the scientific change from Egyptian star-gazing to present-day astronomy. The economist expresses the change by saying that labor used to be cheap but is now expensive. In terms of calendar reform, this means that the time of the common people, which used to be of small value, is now estimated at its true value: hence he insists that amid the revolutions in time, the method of measuring this factor should be regularized. He envisages a

new world that is everywhere demanding a more accurate and equitable structure of society—and calendar reform, easy and simple to adopt, provides what may be called a yardstick whereby claims to social justice may be defined and compared. Clear thinking is assisted by precise terminology. Calendar reform is a symbol of many problems which humanity faces today.

In the educational field our most versatile and widely-traveled representative is Professor Lancelot Hogben—of London, Birmingham and Aberdeen. His academic background covers notable appointments in biology, zoology and physiology, including four years in Canada at McGill and in South Africa at the University of Capetown. He is a well-remembered lecturer at the University of Wisconsin, where his daughter was a student ten years ago. He has crossed Russia from Moscow to Vladivostok, is familiar with Japan, and is fluent in half a dozen languages.

But to the man in the street he is best known as a popularizer of the mysteries of science and mathematics through his best-selling books—*Mathematics for the Million*, *Science for the Citizen*, *From Cave Painting to Comic Strip*. The first of these three popular classics was written, he once told me, for his own amusement while recovering from an illness. The second was turned out in a hurry to help pay his daughter's tuition at Madison. The third was done, says its publisher, "because the author had a lot of urgent matters he wanted to get off his chest."

One of these urgent matters was calendar reform, which had held a high place in his interest since the days of his

Canadian professorship. His book traces the development of the calendar, which the author describes as "one of man's earliest triumphs of reason"; incidentally he criticizes its control (or miscontrol) down through the ages by priestly elements; finally he urges the speedy adoption of The World Calendar.

I think his ardent advocacy of calendar revision, in a book of such wide readership, contributed largely to the revival of British interest in this subject. He is one of our most helpful and eloquent cooperators. His elan, keenness and enthusiasm are contagious. At 58 he still retains an impression of extraordinary youth and freshness, which was frequently the subject of comment during his most recent American visit. He replied to these comments with characteristic wit: "The surprising state of preservation which the press describes as my 'boyish appearance' is due to the fact that I systematically refuse invitations to dinner parties at which people overeat and underthink."

In the scientific world, Professor Hogen's interests have veered during the past decade to a concentration on the new horizons of endocrinology, where he has become an acknowledged leader. On the scientific side of calendar reform, he shares honors with another member of the Committee of Twelve, one whose occupation and position make him the world's leading authority on calendar matters, the Astronomer Royal, Sir Harold Spencer Jones.

Sir Harold, now 63 years of age, succeeded Sir Frank Dyson as head of the Greenwich Observatory in 1933. He had already been at the Royal Observatory as Chief Assistant since 1910, breaking his

direct connection with that famous establishment only once, when he went to South Africa as Chief Astronomer at the Cape of Good Hope. His book *General Astronomy* is the standard textbook on the subject, and it is notable that in it The World Calendar is forcefully advocated.

Today Sir Harold no longer has his headquarters at Greenwich, the centuries-old point of geographical and astronomical calculations, but from a new establishment at the historic and picturesque Sussex castle of Herstmonceux, to which the ancient Observatory was moved after it had been wrecked by bombings. The new location, out of London's foggy and smoke-polluted atmosphere, is a great improvement.

From quite another sphere of cultural activity comes the support of calendar reform by Sir Adrian Boult, England's most distinguished musical leader. As head of the music department at the British Broadcasting Corporation, he has been called "the ambassador of musical good will between the two largest English-speaking nations." He was for many years conductor of the B.B.C. Symphony Orchestra, and now conducts the London Philharmonic, and is a frequent guest conductor in New York, Boston, Chicago and other American cities. He started playing the piano when three years old, and before he reached his teens he had decided to become an orchestra conductor. At 12, he was attending every orchestra concert in Queens Hall, with the score in his hand, following the conductor and familiarizing himself with the techniques of his chosen profession.

I am not aware that Sir Adrian has found any special application of calendar reform to the field of music. He is a

supporter of The World Calendar, not in his capacity as a musician, but in his role as a citizen and an individual member of the community. He has had to deal with the deficiencies of the existing system, and he knows how annoying they can be. He argues that nobody, if devising a calendar for the first time, would so much as consider the adoption of the one which actually exists. Nobody starting afresh would dream of subjecting mankind to the irregularities of the present system. This unanimity of judgment on the defects of the current method of measuring time clears the ground and tactically places calendar reformers in a strong position. This, to an experienced administrator like Sir Adrian, is a fine basis for progress toward enactment.

On the distaff side, the Committee of Twelve has the able leadership of Miss Ruth Fry, who for many years has been an advocate of The World Calendar. She comes from a famous Quaker family, which has helped make history for more than a century. Her own work for Peace covers nearly 50 years, including her far-flung activities as head of the Quaker Relief enterprises in both world wars. She is a sister of the equally active Miss Margery Fry, former principal of Somerville College at Oxford, and a leader in penology and broadcasting.

From the fields of engineering and Rotary comes another of the staunch British advocates of calendar reform in the urbane and courteous personality of John Arthur Rodwell, a Yorkshireman who travels from Durham to London to attend the meetings of the Committee of Twelve. Mr. Rodwell is in his middle fifties, a distinguished designer and fabricator of civil and municipal engineer-

ing projects, particularly in the line of reservoirs and waterworks. As manager and director of water authorities in Lancashire and Durham he has thoughtfully observed the effect of calendar irregularities on the statistical records of these bodies, and it was this experience that led him to an ardent advocacy of current proposals for a revised system of time measurement. He is a frequent speaker on this subject at Rotary clubs and other organizations. "I find a growing interest in calendar reform," he reports, "and I am confident that in the near future a general desire will be expressed by industrialists and business statisticians for a calendar which will be more easily and correctly adaptable to their purposes."

Other representatives of engineering on the Committee include Henry Charles Osborne, M.P. for Birmingham, and Dr. L. E. C. Hughes of London. Mr. Osborne is the head of a heating plant company at Droitwich in Worcestershire; Dr. Hughes is a former president of the British Sound Recording Association and the Institution of Electronics, and for ten years was a professor of engineering at the Imperial College, a part of the University of London.

Emlyn Hugh Garner Evans is an influential M.P. from North Wales. He is a barrister by profession and has visited the United States for the World Youth Congress movement. He is secretary of the Parliamentary Committee on Atomic Energy and a former editor of the *New Commonwealth*.

Another influential member of the Committee is Jack Nutley of the British Railways, a trade union leader and high in the councils of the London Society of Friends. He is one of the most active

officers of the international movement which facilitates the exchange of students between various countries.

As Honorary Treasurer of the British Section, we have the invaluable assistance of a long-time government accounting expert, Benjamin J. Herrington. He is a retired superintendent of H. M. Customs and Excise, known far and wide by the unofficial designation of "Smugglers' Enemy Number One." Genial, energetic and forceful, he has occupied himself since his retirement from official life with lectures on maritime subjects and with active participation in many worthy causes. His interest in calendar reform dates back many years, and insures his taking a vigorous part in the work of enacting a workable revision.

Most active of all the members of the

Committee of Twelve is the Honorary Secretary of the British Section, the barrister James Avery Joyce. He is the spark plug of the organization, an enthusiast whose indefatigable energy carries him across the Atlantic and around Europe in an ever-widening chain of influence for calendar reform. His activities are too well-known to readers of the *Journal* to require cataloguing in this article. Even as I write, he is packing his bag for a trip to the Continent, where he will confer with calendar-reform leaders in Paris, Brussels and Switzerland, and will be on hand in a consultative status for the summer meeting of the U.N. Economic and Social Council. As lawyer, lecturer, author, politician and internationalist, Mr. Joyce has proved himself a worthy leader in a worthy cause.

FRANCE IS READY FOR ACTION

By Therese Leroy

Editor of Methodes, Paris business monthly

THERE is a pressing need, right now, for business men to give their fullest support to the current campaign for a revision of the calendar. They should act without delay, and without wasting any further time in research or discussion. The urgency is due to the fact that the proposed new calendar (with its assurance of meeting the modern need for improved time measurements in an age of intensive organization and high economic productivity) must be internationally legislated within the next few months if it is to be conveniently installed at the beginning of 1956—which is the time when the changeover can be made with the minimum of disturbance. Unless this is done in 1956, we shall have to wait several years for another suitable date.

It is the 1956 date which makes immediate action so important. Legislation this year by the United Nations will leave only two years for the preparatory work which is necessary in the affairs of those who prepare maritime tables, almanacs, calendars, diaries, and the numerous forms used in accounting and bookkeeping.

The proposed reform is basically quite simple and involves no change in the ordinary human attitudes toward the calendar. It does not upset any important historic or religious traditions or customs.

On the other hand, it brings with it many immediate advantages. It will save time and money for everybody. Once it is installed, we may expect a gradual readjustment of holidays, and this further improvement will bring a happier way of life to everyone.

Then what are we waiting for? The new system is simple, logical and reasonable. It has been discussed and approved by business, science and education. If the international legislators will lay aside their chronic inertia, their wavering and hesitation, the job will be done before they know it. We of the business world are persuaded that once the reform is adopted everybody will be heard expressing surprise that it was not done sooner.

INDIA LAUNCHES REFORM MOVEMENT

By Charles D. Morris

ONE of the most important and far-reaching scientific movements in the history of modern India was launched at New Delhi in February, by means of a three-day session of the Calendar Reform Committee appointed a few months ago by Prime Minister Nehru. Presiding over the meetings was the Committee's chairman, Professor M. N. Saha, F.R.S., of the Institute of Nuclear Physics in Calcutta.

Anticipating international adoption of The World Calendar as a universal system of time measurement, the Committee's task is to prepare the ground in India by clearing up some of the current calendar confusions in that country. This involves establishing new and unified foundations for the whole system of time measurement, from the ground up.

For instance, the Committee agreed to recommend the establishment of a central observatory—"an Indian Greenwich"—from which the basic astronomical and scientific data on time measurement would be distributed to the entire country. It was voted that this observatory should be located on the meridian $82\frac{1}{2}$ degrees east of Greenwich and in the approximate latitude of the ancient cultural center of Ujjain.

This would bring the "Indian Standard Meridian" halfway between the meridian of Calcutta and the meridian of Delhi. Nautical and aviation tables would be compiled, so that ships and airplanes can

navigate throughout the terrain of India and neighboring areas by calculations based on this fixed line. Time signals, issued from the central observatory, would tally with these tables.

Meanwhile, a necessary uniformity in the elements of time measurement would be established and enforced by the observatory. At the present time, for instance, many of these elements are variable in different parts of the country. The Hindu civil day is figured from sunrise to sunrise, in contrast to the international custom of measuring a day from midnight to midnight. There are areas where a day is considered as the period between sunset and sunset. And in all parts of India there are certain calendar calculations made in terms of "tithi" or lunar days, which are sometimes reckoned from moonset to moonset, sometimes from moonrise to moonrise.

Such confusion must necessarily be remedied before the country can eliminate its current calendar chaos.

The proposed observatory, equipped with modern instruments similar to those used at Greenwich and at the U. S. Naval Observatory in Washington, will compile complete luni-solar calendars for at least five years in advance. This will include all information required for navigation, as well as for the accurate calculation of religious festivals and other data of local importance in various districts.

In an opening address at the Delhi



meetings of the Calendar Reform Committee, Dr. K. D. Malaviya pointed out that India currently is using more than thirty different calendars. "This creates a situation that is chaotic and intolerable," he declared. "The amount of confusion and inconvenience caused thereby is incalculable, and the need for evolving some uniformity is clear as crystal.

"To take just one instance, the Government finds it difficult to declare a public holiday for a religious festival, because according to various indigenous calendars, the same festival is observed on different dates in different localities. We cannot exaggerate the disadvantages which flow from the incongruity of our people being caught up in a diversity of calendars—which differ in the commencement of their eras, in the initial date of their year and even in their methods of calculation. All this goes on in an epoch

when all the rest of the world has agreed to observe a single unified system despite differences of race and country.

"The advantage of following a single simplified system throughout India cannot be overstated. Besides helping integration of our country through uniformity, it will erase many inconveniences to our people in their daily life.

"How necessary such a reform has become for India may be further appreciated when we learn that even the Gregorian calendar is under careful examination by great international agencies, because it has certain defects that are handicaps in this modern streamlined age, and its revision is being seriously considered by countries which think this matter an urgent one for action by the United Nations.

"The Indian Committee's task, therefore, is two-fold. First, it must evolve

and establish a scientific system acceptable in all areas and communities in India. Secondly, it must encourage and advance the international plans for reform of the Gregorian calendar to help evolve a more scientific system for the whole world."

The precise wording of the primary resolution adopted by the Calendar Reform Committee at the close of its three-day sittings was that "there should be an all-India national solar calendar on a scientific basis, to which may be pegged the lunar calendars which are essential for religious purposes."

The Committee registered its unanimous opinion that the implementation of this unified calendar should be in the hands of "a central astronomical observatory, equipped with modern instruments like the ammonia clock, the quartz clock, etc., for perfected time signal service and for geophysical studies." It was agreed, after discussion, that the observatory should be located in Longitude 82.5 E. and Latitude 23 N.

Professor Saha, in his principal address to the meeting, discussed the history of calendars in India. He paid tribute to the excellent work of early astronomers in Patna, Rajputana, Ujjain and other cultural centers. He showed how calendar deterioration set in after 400 A.D. by the failure to emphasize the need for continuous astronomical corrections of calendar data by means of direct observations. He indicated the difficulties that arose later, owing to this failure to keep the calendar in touch with reality. One result is that certain Indian calendars, where the beginning of the year should come at the vernal equinox, now celebrate their new year on 14 April, although the vernal equinox actually

comes on 21 March. A similar mistake in the Western calendar, he remarked, was corrected by Pope Gregory in 1582.

Professor Saha also praised the recent efforts at calendar reform in Maharashtra by Lokamanya Tilak, and in Bengal by Madhab Chattopadhyaya and Nirmal Chandra Lihiri. He noted, for the benefit of the committee, that one of the staunch supporters of The World Calendar plan in Western Europe is Sir Harold Spencer Jones, Astronomer Royal of the United Kingdom. Many other eminent astronomers, he said, are in full agreement with the enthusiastic opinion of this leader, believing that the reform of the Gregorian calendar will produce great convenience and simplicity.

The Calendar Reform Committee, which will now take its recommendations to the Indian Government, is a subsidiary of the national Council of Scientific and Industrial Research. Its members include: the Minister of Education, Dr. Maulana Azad; Dr. K. L. Daftari, Dr. Gorakh Prasad, Professor R. V. Vaidya, J. S. Karandikar, and N. C. Lihiri. Among the distinguished consultants who attended the Delhi meetings were: the Director of the Indian Standards Institution, Dr. Lal C. Verman; the Joint Director of Archeology, Mr. A. Ghosh; the delegate of the Meteorological Service, Mr. S. Basu; and the Assistant Secretary of the Council of Scientific and Industrial Research, Mr. K. G. Krishnamurthi.

A preliminary "discussion" by the Committee was published a few weeks ago by the Indian Science News Association of Calcutta, and appeared subsequently in the learned magazine *Science and Culture*. Shortly before the February meet-

ing of the reform committee at New Delhi an advance review of the calendar situation appeared in the influential Madras weekly, *Bharat Jyoti*. This article, emphasizing the importance of the Committee's sessions in Delhi, gave an interesting review of calendar history from the time of the Egyptians, and explained:

"Men devised many kinds of calendars. Some took the sun as their measuring rod, others based their reckonings on the moon. It was all very confusing.

"Thus we see that the calendar reform movement has never ceased. The ideal of perfection has eluded the astronomers and scholars of all ages. It seemed absolutely impossible and beyond man's ingenuity to devise a stable and perpetual calendar. In fact, no answer to this ques-

tion came until a Roman Catholic priest named Mastrofini, made his epochal proposal in 1834, on which the present plan for international revision is based. This World Calendar, which came close to enactment at the League of Nations in the twenties and thirties is now before the United Nations, where it is anticipated action will be taken, because seventeen governments have already accepted it in principle.

"In India there is a natural interest in this subject, because the present situation is chaotic and intolerable. Countless myths, religious dogmas, superstitions and astrological practices have damaged the cultural unity and development of the country, through their connection with calendar observances."

OBITUARY NOTES

GANO DUNN, president of the J. G. White Engineering Corporation and one of the earliest members of The World Calendar Association, died in New York City 10 April. He had directed great feats of construction in all parts of the world for more than forty years. His abilities as scientist, administrator and industrialist made him eminent in the fields of education, public service and the application of science to human improvement. His circle of close friends included Thomas A. Edison, Dr. Albert Einstein, Professor Michael Pupin, Herbert Hoover, Dr. Robert Millikan and Bernard M. Baruch. He was influential in promoting the cause of calendar reform with the Pan American Union and with many educational and engineering groups.

HARVEY N. DAVIS, president of Stevens Institute of Technology and a long-time advocate of The World Calendar, died 3 December 1952. He was one of the nation's most distinguished mechanical engineers, with doctorates from Harvard, Brown, Columbia, Rutgers, Rensselaer and other institutions of learning. His service with the government included two years as director of research for the War Production Board. He was for a long time with General Electric in turbine and aeronautical engineering, later served as president of the American Society of Mechanical Engineers, and was the author of a standard school textbook on physics.

EDWARD V. HUNTINGTON, Professor of Mathematics at Harvard and an enthusiastic supporter of calendar reform for the past 20 years, died in Cambridge, Mass., on 25 November 1952. Born in Clinton, N. Y., in 1874, he was educated at Harvard and in German universities, returning to America for a post on the Harvard faculty, where he continued his association until his death. He was the author of numerous textbooks and monographs, and an influential member or officer in a dozen learned societies, many of which he persuaded to endorse calendar reform.

THE CRESCENT AND THE MOON

By Dr. Hashim Amir Ali, Osmania University, Hyderabad, India

Hyderabad is the capital of what was, until recently, the premier princely state in the center of India. Dr. Amir Ali is the leading authority in that area on calendrical matters. In 1946 he initiated a movement to synchronize the dates of the Fasli months in the official calendar of his state, showing that the current system had diverged from the Persian calendar owing to the neglect of intercalation since 1707. He attributes the bold liberalism shown in the following article to his association with such forward-looking thinkers as Rabindranath Tagore, Sir Akbar Hydari and Mirza Abul Fazl, the first Moslem to publish an English translation of the Koran in chronological order. Dr. Amir Ali is currently in the United States on the Fulbright and Ford Foundations. He received a doctorate in rural sociology from Cornell University in 1929.

THIS article is an attempt to analyze the problem of introducing effectively The World Calendar in the realm of the Crescent where the moon alone still dominates the measurement of time. It is a realm in which hundreds of thousands aspire to visiting Mecca, in Saudi Arabia, for the annual *Hajj* in the last week of their lunar "year" and where millions fast in the month of *Ramazan*—while both these, the pilgrimage and the month of fasting, recede from year to year, coming in turn through spring and winter, autumn and summer—and where any form of intercalation is taboo.

Reform in this calendar that has been followed over thirteen centuries, and has, like others, acquired religious significance, is a challenge, not only to the governments of Muslim States, but to the world as a whole.

Naturally, such an unrealistic calendar could not serve the purpose of worldly life even in the Middle Ages. What the Muslim kings of old did, therefore, was to inaugurate fresh solar calendars for administrative purposes and leave this impractical reckoning for the realm of religion alone. *Alberuni* (Muslim historian, 1000 A.D.), enumerates several such instances: *Omar Khayyam* is associated with the *Jelali* reckoning in Iran; *Akbar* of India inaugurated the *Ilahi* calendar. Scores of others have left their stamp on the essentially solar and secular calendars now in vogue in different Muslim States. No one has dared to touch the purely lunar calendar governing the *Hajj* and the *Ramazan*.

Even today the Muslim world, while accepting The World Calendar, seems to intend by-passing the lunar calendar by leaving it strictly alone. For example, the decision of Saudi Arabia, the repository of Mecca, communicated through their Minister to the United States in 1948, reads as follows: "Should the whole Western World, including the Americas, come to a decision to substitute the Gregorian Calendar with The World Calendar, Saudi Arabia may see no objection to *indicate* [*italics ours*] the corresponding dates of The World Calendar on the Lunar Calendar now in use."

The other Muslim States are not so specific but there is no doubt about their inten-

tions. They would accept The World Calendar for civil use, but would not alter the present religious system.

Perhaps this is the wisest course. And one could even hope that the *indication* would, in time, become so important as to replace gradually the lunar reckoning itself. Unfortunately, that cannot be even a hope as long as the *Hajj* and the *Ramazan* continue to follow the moon, and the Muslim world continues to assemble annually in receding seasons.

The following analysis, therefore, is not for the Muslim masses but for the Muslim intelligentsia. It is hoped that if they are once familiar with the origin of the lunar calendar (and convinced of its being based on what the writer believes to be a *misinterpretation* of two Quranic verses) their thoughtful effort will find a way to bring the annual rhythm of Muslim life into harmony with the rest of the world.

Intercalation or Postponement? Ask any learned man defending the purely lunar reckoning, for the basis of his argument and he will quote to you verses 36 and 37 of the Ninth Sura in the Quran: "Twelve is the number of months with Allah, written in Allah's Book on the day when he created the heavens and the earth; of these four are sacred; that is the eternal religion. . . . *The postponement* is simply an increase in unbelief. . . ." (Alexander Bell's translation, 1937.)

This translation has been selected because it is the latest, but someone may insist that the word "*Nassi*," in the original Arabic, should be translated *intercalation* and not *postponement*. But here is how others have translated it:

1. George Sale	1734	<i>The Transferring</i>
2. J. M. Rodwell	1861	<i>To Carry Over</i>
3. E. H. Palmer	1880	<i>Putting Off</i>
4. Abdul Hakim	1905	<i>The Substituting</i>
5. Mirza Abul Fazl	1911	<i>The Putting Off</i>
6. Mohammad Ali	1917	<i>Postponing</i>
7. Mirza Hairath	1919	<i>To Change</i>
8. S. H. Bilgrami	1926	<i>The Putting Off</i>
9. Ghulam Sarvar	1929	<i>The Postponement</i>
10. Abdullah Yusuf Ali	1934	<i>The Transferring</i>
11. Marmaduke Pickthal	1939	<i>Postponement</i>

So for two hundred years no Muslim or Christian scholar has translated that word, at least in the English language, as meaning *intercalation*. Is it not reasonable therefore to assume that what is condemned is not *intercalation* but really some form of *postponement*? And yet it is this verse which has absolutely negated any form of *intercalation* throughout Muslim history. The following, for example, is an extract from Alberuni's *Athar-ul Baqiya* written almost a thousand years ago and translated in English by Edward Sachow in 1879:

The land-holders assembled at the time of Hisham-bin-Abdul Malik and called on Khalif Alqasri; they explained to him the subject, and asked him to postpone Nauroz (New Year) by a month. Khalid declined to do so, but reported on the subject to Hisham, who said: I am afraid, that to this subject may be applied the word of God. "*Intercalation is only an increase of heathenism.*" (Sura IX, 37.) Afterwards, at the time of Alrashid the land-holders assembled again and called on Yahya bin Khalid bin Barmak, asking him to postpone Nauroz by two months. Now Yahya had the intention to do so, but then his

enemies began to speak of the subject, and said: He is partial to Zoroastrianism. Therefore, he dropped the subject and the matter remained as it was before.

Reference to Context. The next question to be asked is: When were these two verses promulgated? Here again there will be little difference of opinion. Everyone admits that they were delivered in the last or Farewell Pilgrimage just three months before the Prophet passed away; and *Traditions* also record that he rejoiced at the *Hajj* that year corresponding with the season originally ordained for it.

To the above everyone agrees. But its logical conclusions some try to evade. If these are the verses which put a stop to the intercalation of the thirteenth month, evidently intercalation of a thirteenth month was in vogue during the whole lifetime of the Prophet, and, as far as he was concerned, he observed the *Hajj* and the prescribed fasting more or less in one particular season, whatever that may have been. Would it not be following his "Sunnah," or example, to do likewise?

Some try to evade this by assuming that even before the advent of these verses in the last Pilgrimage the Arab year consisted only of twelve lunar months without any intercalation and that only some form of "postponement" was prohibited by these verses. But the former part of this hypothesis fails to explain: first, the insistence on the "twelve months" in the verses; and second, the seasonal significance of the names ascribed to the months of the existing calendar: *Rabi* (cultivation); *Jamad* (setting); *Rajab* (the season in which the heavy bunches of dates have to be supported); *Ramazan* (the month of intense heat); *Shawwal* (the breeding season of the camels); and *Safar* (the season of emptiness).

Indeed, the more one analyzes, the more is one convinced that the Arabs did have a luni-solar calendar like that of the Jews, and that this calendar served both religious and secular functions. The earlier passages of the Quran, referring to the sun and the moon being reckoners of time, as well as numerous *Traditions* confirm this hypothesis. One cannot get away from the fact that the Prophet observed this luni-solar calendar throughout his life and performed *Hajj* and Fasting in more or less the same seasons.

What then was the significance of these verses? And what do they really condemn? The answer to this lies in the analysis of each of two distinct cultural patterns and the unfortunate interaction between them. Let us study these three phases one after the other.

A. The Luni-Solar Calendar. As explained above, the Arabs had a fairly efficient luni-solar calendar in which the names of the months denoted the cycle of the seasons. *Rajab* was the month in which the date harvests were ready. *Ziqada* was the month in which the camels were trained. *Zilhajj* corresponded with the *Thanksgiving* of America and the *Daserah* of India. The harvest was over, the camels had given birth to their young and the surplus animals were slaughtered and feasted upon. The bright light of the tenth of the moon, identical with the 10th of *Ashwin* in India, was taken advantage of and there was feasting. Exactly 20 days later, corresponding to the *Divali* in India, the new year of the Arabs commenced on the first day of *Moharram* when merchants started their new accounts.

In short, the *Hajj* of the pagan Arabs was identical with the *Daserah* of India and had similar rites associated with it and so did the new year in *Moharram* correspond exactly with the *Divali* still celebrated in India. The Arab luni-solar calendar was exactly what a luni-solar calendar generally is wherever it is in vogue.

The difference lay only in the method of intercalating the thirteenth month. It has to be done every two or three years and this "two OR three" is the most significant aspect of our analysis.

The relation between the movements of the sun and the moon does not permit the addition of a thirteenth month regularly *every three years*. If there is to be real correspondence, it has to be done say 3 times in 8 years or 7 times in 18 years. The Hindu and the Jewish calendars have elaborate systems for determining when these intercalations would be made. The Arabs, among whom there were relatively few men conversant with astronomical calculations, had a system in which a family of astronomers, known as the "*Qalammas*" (the name always suggests to me that the famous Columbus was a descendent of that family) was responsible for proclaiming at the *Hajj* (falling in the last month of the year) that this year a month would or would not be added between the last month of the current year, *Zilhajj*, and the first month, *Moharram*, of the next year. And Nature itself gave this elder of the *Qalammas* family a certain amount of discretion in determining when this intercalation was to be practiced. It was this discretion, as we shall see later, that was the cause of confusion.

B. The Four Holy Months. Running parallel to this practice of intercalation was another practice: That of observing four months of truce in which plunder was forbidden.

In lands, or even periods, of scarcity, plunder is as essential to survival as hospitality. Society almost has to provide for one as for the other, keeping one in bounds and encouraging the other to its utmost. Wherever life for the individual is hard and plunder is inevitable, there will also be found hospitality as one of the most conspicuous *mores*.

The Arabs took plunder for granted, as an inevitable necessity. But they considered the destruction of date palms as wrong at any time and by prohibiting plunder in four months of the year they prescribed a rule that prevented tribal annihilation. Plunder was forbidden in the month of *Rajab* when the date harvest was ready. For that would deprive the plundered families of all their means of existence. Likewise they prohibited plunder in *Ziqad*, when people would be assembling for the *Hajj*, in *Zilhajj* when the assembly actually took place, and in *Moharram* when the assembly would be dispersing. The last three months came together—two being the last of one year and the third being the first of the next year. In itself this too was an excellent cultural pattern, adapted to the time and the place.

C. Conflict of Patterns. The interaction between these two cultural patterns, each excellent in itself, is an example of how the coming together of two good things can lead to something not so good—how contacts cause conflict.

In this case it was the intercalary thirteenth month of the first pattern, falling between two years and therefore at times between two sacred months, that was the cause of confusion. Was this thirteenth month itself to be sacred or not? Were five sacred months justified? Was plunder prohibited in this fifth month or not? Almost every year they argued and often they fought on the very question as to whether they should, or should not, fight! And the latitude given by Nature to the *Qalammas* (in prescribing or not prescribing intercalation) on several occasions made him the arbiter of the peoples' destinies.

Vague and diverse solutions were practiced in the form of *Nassi* postponements. As the Quran says: "... they make it free one year and make it sacred another, that they may make the number of what Allah had made sacred, adaptable, and make free what Allah had made sacred; the evil of their actions appears good to them, but Allah guideth not the unbelieving people." (Bell: remaining part of verse 37, Sura IX.)

Was Intercalation Forbidden? At this stage of our analysis the question again arises as to whether intercalation itself is or is not forbidden in these two verses. As shown previously it is *postponement* and not *intercalation* that is decried and there is no prohibition even of the thirteenth month. But the insistence of the Quran on there being only twelve months in God's eternal calendar rules out, not only the intercalation of a thirteenth month but any calendar which involves a thirteenth month. Islam, in the light of these verses, cannot accept a luni-solar calendar.

Does this insistence on twelve months then give a hint for the adoption of a *purely solar* calendar? Personally, I think it does. And my inclination is based on the fact that Islam evolved in the midsts of three religions: Arab Paganism, Christianity and Judaism. It retained many forms of the first; for example, Jerusalem the center of Christianity was first prescribed as the Qibla for the Muslims, and later Mecca was given that distinction. And it must be remembered that the Christians had enjoyed the Roman, purely solar calendar, for more than 500 years. The verses, therefore, by their insistence on the twelve months in God's calendar merely indicated the adoption of the purely solar Christian calendar of twelve months, as against the luni-solar calendar of the Jews or Arabs in which the thirteenth month was the governing factor and cause of confusion.

And there are really only *twelve months in God's calendar* ever since the earth began to revolve around the sun in its present orbit. The two solstices and the two equinoxes divide the cycle of the year into four periods and in each of these a season begins, reaches its zenith and declines—making twelve sub-seasons in all. These may be called by any names one likes. The Quran merely emphasizes this fact in Nature—and man's incorporation of it in his calendars is a testimony of his attempts at abiding with God's creation. The World Calendar is only a further effort at closer adjustment.

The Crescent and the Moon. The summary of the thesis discussed above is that the *misinterpretation* of these two verses has had a profound influence on the history of Islam and, through it, of the World. They merely condemned the confusion brought about by the interaction of two cultural patterns and insisted on a twelve-month

calendar which, because twelve lunations do not constitute a *year*, indirectly recommended a solar reckoning.

The Prophet passed away soon after these verses were promulgated and his followers, involved in more persistent problems, gave up the thirteenth month but continued the lunar months, thereby ushering in a purely lunar calendar, unique in the history of human civilization.

For 1,300 years this calendar has kept Muslim religiosity oblivious of the seasons and the rhythm of nature. The rites of the *Hajj*, prescribing bare-headedness and the wearing of only two pieces of cloth, could only have been meant for a time of year when it was neither too hot in the day nor too cold in the night. But, because this *Hajj* has been rotating through even the hottest and the coldest months, thousands upon thousands have suffered the rigors of the Arabian climate. Similarly, slaughtering of animals for the feeding of the poor had been timed for the period of the year in which animals were surplus. Yet, owing to a *misinterpretation* of the holy word, animals have been slaughtered times without number both in their breeding season and in periods when they were heavy with unborn young. The moon governing the religious calendar has indeed exacted a costly toll in the lands of the crescent, despite the invention and adoption of parallel solar calendars for secular purposes.

Is Reform Possible? That is a question not for me but for the statesmen of the Islamic world to consider. And because kings still hold sway in the Muslim world, a great responsibility lies on them. Perhaps King Ibne Saud (the Guardian of the Ka'ba) will immortalize himself by making the most important reform in 1,300 years of Islamic history.

I hope I have made it clear that the Quran and the Prophet are certainly not to be blamed for this state of affairs. The present-day purely lunar *Hijri* calendar is an institution which had its beginnings *after* the Prophet. It is an institution inaugurated by men who claimed no infallibility and to whom no infallibility has been ascribed. They were known best and loved best for their admitting their mistakes whenever they made them and for allowing their mistakes to be pointed out by others. Surely, their souls will rejoice at having another of their mistakes corrected. The time-worn axiom "Better late than never" applies appropriately to this significant situation.

MONDAY HOLIDAYS

Grand Rapids (Michigan) Press

MICHIGAN is one of the 34 states where bills have been introduced to stabilize several of our holidays on Mondays. The movement demonstrates how much dissatisfaction exists with respect to the present calendar.

We should go all the way and adopt The World Calendar, which has been supported by 17 countries. Logic is on the side of such a change. The world has been limping along with its awkward system for several centuries, despite the fact that a better calendar can be had without causing any political or social revolution. The only reason it hasn't been adopted is that not enough people have thought about it. Apathy is the deterrent. But Americans at last are awakening to the fact that the calendar they use is out of date every day of the year, and every year.

FROM THE ASTRONOMER'S VIEWPOINT

By Mrs. A. M. Bonelli

An Address at the Astronomical League Convention, Dallas, Texas

BECAUSE the measurement of time is a fundamental concern of the astronomer, special attention will always be given to the opinions of a group like ours on matters of calendar reform. This is in accordance with history and tradition. In 1919 to 1922, the International Astronomical Union made a formal study of calendar reform. It appointed an eminent committee (known as Commission 32) which made the following recommendations: (a) Adoption of a perpetual calendar of 52 weeks, plus one or two extra days; (b) Division of the year into four quarters of 91 days each, arranged into three months of 31, 30 and 30 days respectively.

This action, taken more than 30 years ago, shows that astronomers through their International Union, have a certain claim to the paternity of The World Calendar, the plan which, according to the Secretary-General of the United Nations, "has received the most favorable comments of all the proposals studied on an international plane."

The action of the International Astronomical Union in 1922 was promptly followed up by the League of Nations, which inaugurated its study of calendar reform in 1923. The astronomers' recommendations became the starting point of the League's deliberations, and in the end the League (after considering and

eliminating 500 different plans for calendar revision) gave its total preference to The World Calendar of 12 months and equal quarters, which corresponds exactly to the recommendations of the astronomers' Commission 32.

Our dissatisfaction with the present calendar is easily explained. We use the calendar as a system of time measurement, just as we have systems of linear measure, and systems for measuring electrical energy, heat, light, money and other things.

In linear measure, we have 12 inches to a foot, three feet to a yard, etc., and these units are always the same and always comparable and commensurate. In time measurement, the small units of time such as the hour, minute and second, are good and useful and reliable.

But with our longer time-units, we have complete confusion. The day, the month and the year are incommensurable; that is, it is impossible to express one time-unit accurately in terms of another. The monthly units vary in length from 28 to 31 days; quarters and half-years are variable units. The year is not an exact number of weeks, nor are the quarters and half-years; the weekdays wander from year to year.

For accuracy's sake, we should seek to make these units fit as closely as possible. Our present calendar falls far short

of the precision that is so desirable in the modern world of advanced technology, coordination and rationalization.

It is the despair of the scientist and the statistician that days, weeks, months and quarterly divisions should wander about in such aimless fashion.* Weekdays and month-dates never agree in successive years; the weeks run in and out of the months in an unpredictable manner; the months are unnecessarily irregular in length, and a year is never an aggregate of its internal time-units.

These defects have costly and annoying results. They complicate the working out of programs for all undertakings which have to be planned ahead; they require costly adjustments of monthly, quarterly and half-yearly data in order to make them comparable from year to year; they entail needless annoyance and difficulty in many activities of life; the midweek holidays dislocate industrial production and cause absenteeism.

The perpetual World Calendar meets

*Our present calendar, in its role as a social and economic timekeeper, is sadly out of step with our vaunted "practical" civilization. This has been pointed out many times, and its defects need not be listed again. The plan of The World Calendar has been widely circulated. It is a scientific document; it is simple and perpetual; it meets all social and economic as well as astronomical requirements. I see no good reason why it should not be adopted.—Robert G. Aitken, late Director of Lick Observatory.

Astronomers are invariably interested in questions relating to the passage of time, particularly the practical problem of recording the sequence of days and nights accurately. The formation of a calendar is essentially an astronomer's task, but since the calendar affects the life and interests of every citizen, the public should be interested in the question and should not relegate it to a few specialists, or leave it to uninformed political expediency.—Prof. A. V. Douglas, McGill University.

with a high degree of satisfaction all the inaccuracies of the present system. Its structure is about as near perfection as we are likely to get. Its 12 months are arranged into equal quarters of 91 days; the quarters divide into an exact total of 13 weeks; the half-years are equal; the patterns of weekdays and month-dates are identical year after year.

Most outstanding feature of the new calendar, aside from its stable patterns of weekdays and month-dates, is the comparability of its quarters. It gives new emphasis to the quarterly unit of time, which eventually will prove highly important and valuable. I recall a statement by a government official in the Office of Price Administration in Washington:

"The quarterly period is in many ways the most important time-division in industry. Three months is the closest and most practical expression of the season, which is set by Nature as the normal operating period in production and business. The best that operating executives can hope to do, restricted as they are by irregular and incomparable days, weeks and months, is to know accurately what goes on four times a year, and to do something about it. Any more frequent presentation of figures is utopian; any less is dangerous. Four quarterly analyses for scientifically equalized periods are ideal. I am fully in favor of such an improved and stabilized calendar."

It is important that this meeting, and other astronomical gatherings, shall continue to express approval of The World Calendar, and shall urge our government to instruct its delegation at the United Nations to push the enactment of this reform.

CHART SHOWS NEED FOR REVISION

By Arthur J. Hills, Ottawa

In the official organ of the Canadian Chamber of Commerce, a monthly titled Canadian Business, Mr. Hills displays an ingenious diagram to show the variability and irregularity of the present calendar, and the advantage of a perpetual system, with every year identical. His chart is shown on the next page. It is accompanied with the explanatory text printed below. Reprints are available either from The World Calendar Association in New York City, or from the Canadian Affiliate at 102 Bank Street, Ottawa.

BUSINESS men find that the hit-and-miss character of our present calendar system is one of the glaring misfits of this modern age. Science and research have reduced many subjects of time and sense to calculation and careful formulae, but the precision which we have to expect in many other respects is sadly lacking from one of the basic aspects of our life—that of the calendar.

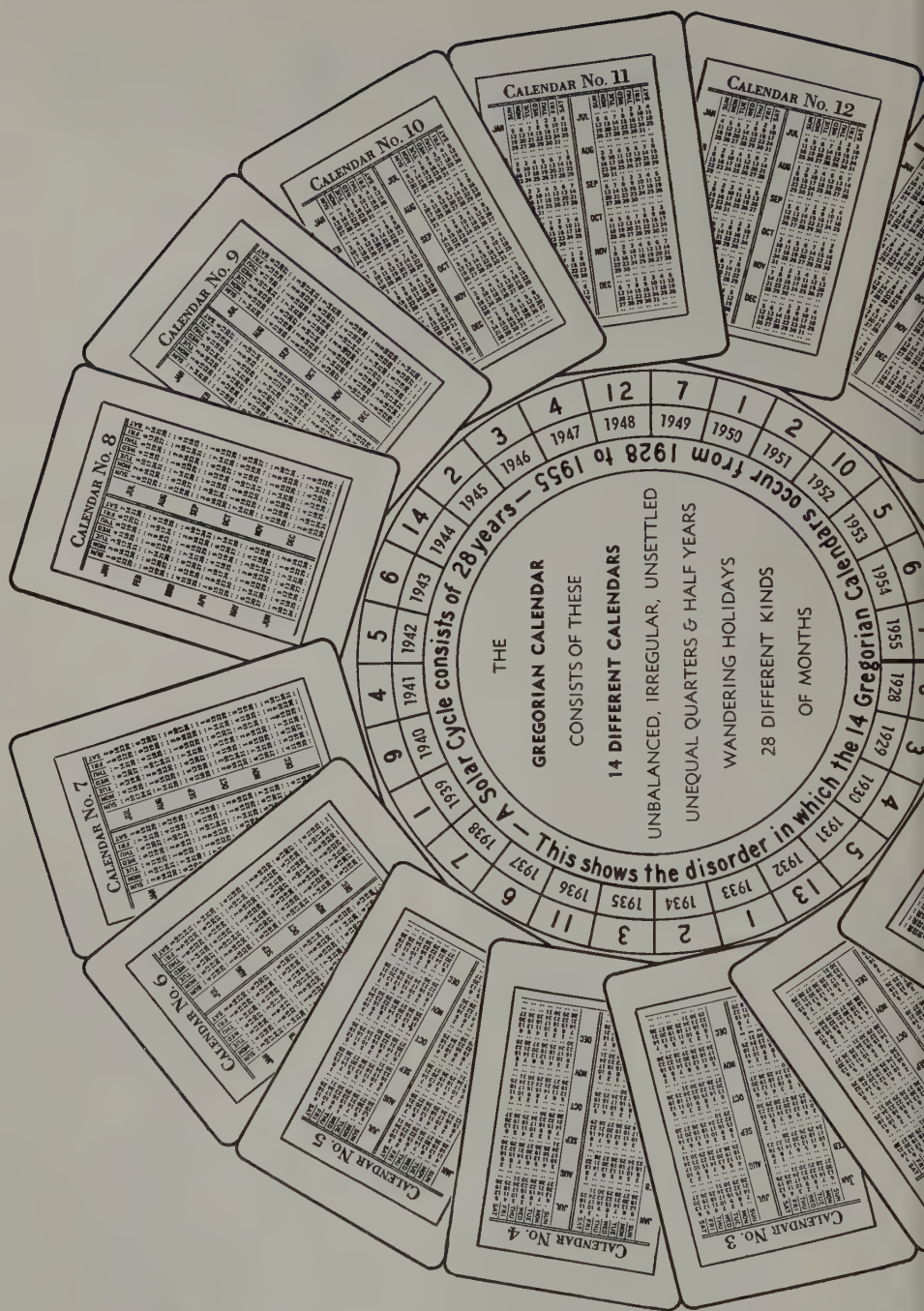
The World Calendar Association advocates a new calendar, which it aims to put into effect on 1 January 1956, to supersede the Gregorian calendar at present in use. The latter is in fact comprised of 14 different calendars which occur at irregular intervals over a period of 28 years. The illustration on the next page shows the 14 individual calendars. Those on the left are the seven for ordinary years, No. 1 commencing on Sunday, No. 2 on Monday and so on to No. 7 on Saturday. The seven leap year calendars, to the right, begin in a similar way and are numbered 8 to 14.

To see how all of these 14 calendars fall, it is necessary to examine their occurrence in the course of 28 years, known as a solar cycle. The diagram shows the

years from 1928 to 1955, and indicates the calendar for use in each year. It will be noted that the numbers 1 to 7 occur three times, while those from 8 to 14 only once. This, of course, is because there are three ordinary years to one leap year.

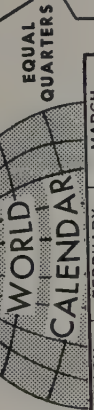
An additional irregularity occurs in the spacing of the years. No. 1, first used in this cycle in 1933, was again used in 1939, and then in 1950, a spread of six years in the first instance, and of eleven years in the second. In the case of calendar No. 2, first used in 1934, there was a spread of eleven years before it turned up in 1945, and then six years before its use in 1951. The present year's calendar, No. 5, on the other hand, was previously used in 1942 and 1931, while No. 10, used last year, appears only once in the cycle because it was a leap year.

As a leap year calendar must be used after three ordinary year calendars, there can never be more than three consecutive numbers. For example, in 1933, 1934 and 1935, calendars numbered 1, 2 and 3 commencing respectively with a Sunday, Monday and Tuesday, were used. Then a leap year beginning with a





BALANCED
REGULAR
PERPETUAL
TWO MONTHS



EQUAL
QUARTERS

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7	8	9	10	11	12	13	14
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
15	16	17	18	19	20	21	12	13	14	15	16	17	18	19	20	21	22	23	24	25
22	23	24	25	26	27	28	19	20	21	22	23	24	25	26	27	28	29	30	31	
29	30	31					26	27	28	29	30									
APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7	8	9	10	11	12	13	14
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
15	16	17	18	19	20	21	12	13	14	15	16	17	18	19	20	21	22	23	24	25
22	23	24	25	26	27	28	19	20	21	22	23	24	25	26	27	28	29	30	31	
29	30	31					26	27	28	29	30									
JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7	8	9	10	11	12	13	14
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
15	16	17	18	19	20	21	12	13	14	15	16	17	18	19	20	21	22	23	24	25
22	23	24	25	26	27	28	19	20	21	22	23	24	25	26	27	28	29	30	31	
29	30	31					26	27	28	29	30									
OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7	8	9	10	11	12	13	14
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
15	16	17	18	19	20	21	12	13	14	15	16	17	18	19	20	21	22	23	24	25
22	23	24	25	26	27	28	19	20	21	22	23	24	25	26	27	28	29	30	31	
29	30	31					26	27	28	29	30									

Woo-holiday, (a World Holiday), W or 31 December (345th day), follows 30 December every year
The Leap-year Day, (another World Holiday), W or 31 June follows 30 June in leap years.

- Every year is the same.
- The quarters are equal: each quarter has exactly 91 days, 13 weeks or 3 months; the four quarters are identical in form.
- Each month has 26 weekdays, plus Sundays.
- Each year begins on Sunday, 1 January; each working year begins on Monday, 2 January.
- Each quarter begins on Sunday, ends on Saturday.

THE WORLD CALENDAR

From Canada comes this ingenious diagram, designed to show the variability and irregularity of the present calendar, and the advantage of a perpetual system, with every year identical. The drawing is reproduced from the June issue of the organ of the Canadian Chamber of Commerce.

Drawing by H. J. Dodds

Design by A. J. Hills

Wednesday was needed to give an extra day, followed by an ordinary year commencing with a Friday, No. 6 used in 1937.

Use of each of these calendars is necessary because the year is not treated as complete in itself, so that besides the 14 different years, there are 28 different kinds of months and 35 different day and date arrangements of the so-called quarters. Quarter and half-years are not mathematically correct.

The World Calendar Association plans to stabilize these irregularities with a calendar which treats each year as a unit, and in which the week (already regarded as the most practical time measurement and with a background of habit and custom) is given full recognition within each year. Sunday has for many years been accepted as the first day of the week in the civil calendar, and is continued as the first day in The World Calendar. Each year, half-year and quarter commences with a Sunday and ends on a Saturday, and each quarter is made up of 91 days (13 weeks) in which the months have 31, 30 and 30 days each.

By this method, 52 weeks are completed on Saturday, 30 December. As the length of the year requires one more day than 52 weeks in ordinary years, and two days more in leap years, The World Calendar completes the year by adding a day of rest, on 31 December, to be called *Worldsday*, at the end of every year, and a similar additional day of rest halfway, on 31 June, in leap years.

These "days apart" will be seen to be definite dates, and it is anticipated that they will have world observance as holidays dedicated to the development of

greater understanding, friendship and cooperation among nations.

The use of these stabilizing days is the one method by which a calendar may have the same day and date arrangement every year and still maintain scientific accuracy. With this method, each year is complete in itself; there is nothing left over and the year is fixed in perpetuity, providing for perfect comparability between corresponding segments of years.

Accurate quarters are part of the new pattern, and holidays whether dated or set can be put on an invariable schedule instead of there being almost unpredictable dates and holiday disturbances. With every year the same, all planning ahead will be simplified, and a particular date will always fall on the same day of the week.

Because of the greater convenience and the economic gains to be obtained from the use of such a calendar with an invariable day and date arrangement, the Canadian Chamber of Commerce has requested the Government to take the initiative in having The World Calendar placed on the agenda of the United Nations Assembly at the earliest possible date.

Organizational support for The World Calendar in Canada has developed great strength in recent years. Besides the Chamber of Commerce, the reform program is supported by the Canadian Manufacturers Association and by the three large labor groups—the Trades and Labor Congress, the Canadian Congress of Labor and the Canadian and Catholic Confederation of Labor. These three organizations together speak for more than 85 per cent of Canadian organized labor.

IRELAND ORGANIZING STUDY GROUP

By John J. O'Meara, D. Phil. (Oxon)
Professor at University College of Dublin

MY article last year on the *Active Interest in Ireland* was so well received that it has seemed good to develop the subject somewhat more, and in particular to indicate the peculiar importance of my country in the campaign for Calendar Reform.

This importance arises, not from Ireland's geographical position, nor from her political or economic influence, but mainly from the fact that the overwhelming majority of the people of the Republic of Ireland are Roman Catholics. They are very much more than nominal Catholics; they are faithful to their religion and their religious leaders in the most absolute way.

Hence the people of Ireland will take ecclesiastical direction on all things relating to Calendar Reform with the utmost obedience; nor will any reform which is not at least tacitly approved by the Church have much chance of success in any Irish circles, be they political or commercial or whatever else. At the moment the attitude of the people as a whole is quite certainly that prescribed in a Rescript from Rome in July 1937. Briefly the position taken is as follows: 1. The Church does not oppose Calendar Reform. 2. The Church herself—in view of the fact that her own Pontiffs and the pre-Christian Pontiff of Rome, Julius Caesar, have been responsible for previous reforms—claims a particular competence in Calendar Reform. 3. The Church at the moment



Professor O'Meara

is not persuaded that there is any general demand for Calendar Reform.

It is evident that anyone interested in Calendar Reform in a practical way should on the one hand join forces with the Church in this matter, and on the other try to persuade her that Calendar Reform is needed and is demanded. It is a question of getting enough Catholics interested and active.

And here is where Ireland comes in. While her people will loyally accept the Church's directions, they can also influence and affect these directions. Not merely is there question of the Irish at home—there is question too of the Irish

abroad, in England, the Commonwealth, and above all the United States of America.

It is hardly necessary to stress the power of influence for Calendar Reform which could be won if the Irish Catholics, at home and in their new homes over many seas, were to show a strong interest in the Reform of the Calendar. There would then indeed be good hope that the Church as a whole, with her immense prestige and position, would interest herself actively in the problem and assure the victory.

But the last thing Catholics—and Irish Catholics in particular—will do is to dictate or even seem to dictate to their Church. There is therefore hardly any place in Ireland for an Association to promote Calendar Reform as such. But there is place for an association to study and investigate the question, to discover the needs for reform that can be discerned in Ireland, to make those needs known, to invite the sympathetic cooperation of Churchmen, and to keep the people informed of what is happening in this matter elsewhere.

Such an association is shortly to be set up. It will on the one hand accept willingly all the help and advice which The World Calendar Association is so uniquely qualified to give. On the other it will seek to make the need for Calendar Reform known to Irish Catholics and through them, as far as possible, to the Church as a whole. As it is important to persuade United Nations that reform is needed, so it is important to persuade the Church in like manner. This the Irish association will seek with all its power to do.

And the time is fully ripe for such an association. We have been fortunate in

having in our midst one who since the late twenties has written much on, and served actively abroad on committees dealing with, the Reform of the Calendar. Mr. Keith Eason, one of our most respected business men, is still full of enthusiasm for his subject; and although he does not quite see eye to eye with all the details of the reform proposed by The World Calendar Association, he nevertheless is very eager that there should be plenty of open discussion of the subject. He has in fact kept the subject before the public for over a quarter of a century and his services in keeping it there are truly invaluable.

Interest has increased, especially in the last year or so, due partly at least to a series of articles on Calendar Reform published in one of the most influential papers. These articles were the subject of editorial comment in another paper and there followed correspondence in the public press, which was of great value in arousing general interest in the subject.

As a result of all this the Dublin Rotary Club invited Mr. James Avery Joyce, the active Secretary of the British Association for Calendar Reform, to address them on the subject in March of this year. This meeting was remarkable for the liveliness of the discussion which followed and there were, of course, full press reports.

It was decided then that an association to discuss the problem and how Ireland could profitably contribute to the movement be set up, and at the moment a steering committee is in process of being formed.

Great care is being taken to ensure that when the association is eventually set up it will be truly representative and that it have no suggestion about it of

being in any way "faddish"—for the Irish in Ireland in these matters are suspicious of novelty. It is hoped then to have the committee of the association composed of persons respected in their various professions and callings—the Church, the Law, Education, Business, Civil Service and other circles.

The terms of reference will be in the main concerned with two things: 1. To discover the defects of the present calendar as they are revealed in the actual situation in Ireland, whether in the schools and universities, professional life, business, government and agriculture. In no other country of the West, perhaps, is so much of the public life affected by the wandering Easter; for in no other country of the West does this religious feast so completely dominate all other activities. 2. To inform the public not only of these special defects affecting themselves, but also of the whole case for Calendar Reform as it can be built up from the reports of associations all over the world. It is proposed to carry out this second part of the programme through occasional public meetings, discussion on the radio, and of course writing in the public press and the distribution of literature.

Although it will not be necessary to stress the matter in the terms of reference, the one point which will constantly be kept in mind is the cultivation of the most friendly possible relations with the representatives of the Church* — for

otherwise no profitable work can be done in Ireland; and if on the other hand good relations are cultivated and maintained, the contribution of Ireland to the common cause can be very great indeed.

It must sometimes seem to the peoples of great powers that the inhabitants of a small country can have little influence, if indeed any, on the course of great public controversies and events. But the peoples of small and seemingly unimportant countries console themselves and draw strength from the reflection that in the past they have contributed not a little to the welfare of humanity as a whole. Thus it was with the Jews in Palestine. Thus it was with the Greeks who, in Horace's immortal phrase, captured those who captured them, the Romans. Thus it was when Ireland herself sent her scholars abroad in the ninth century to rekindle again the fire of knowledge that had burned low in Europe in the Dark Ages. Thus also, in relation to the recent history of Calendar Reform, we find small countries like Panama and Peru taking a leading part in advocating the proposed new system.

In the same way, although we are a small country of little power and political influence, we in Ireland can even today play a part in making the world a better place to live in. One of the things we can do is to cooperate in the work of Calendar Reform; and in this because of the particular circumstances in the country, we may be able to play a special role.

We say in Ireland when we salute a man working—*go mbeannuigheadh Dia an obair!* God bless the work! Our wish for those who work in any way for the welfare of mankind must ever be the same.

*Many Catholic priests are enthusiastic supporters of The World Calendar. The "stabilizing day" principle was first formulated by a Catholic priest, in 1834. Cardinal Mercier revived European interest when he presided over the International Astronomical Union's Commission on Calendar Reform in 1922.

WORLD'S MOST WONDERFUL STORY

A Review by Linda Halsted

WORLD IN THE MAKING, *The Story of International Cooperation. A book by James Avery Joyce; 160 pages. New York: Henry Schuman, 1953.*

IT IS quite easy to think of James Avery Joyce as a sort of modern Sir Galahad, dressed in busy tweeds instead of tin, with a glowing smile to take the place of the gleam of shining armor, and a heart bursting with determination to make the world a better place for everybody.

As a 20th century knight-errant, he covers more territory in a year than Galahad did in a generation. The wandering knight of olden times was limited by the speed he could get out of a horse, the basis of all ancient cheval-ry. But Joyce has the seven-league boots of modern transport—airplanes, railroads, automobiles and ocean liners. Twelve times in the past few years he has crossed the Atlantic in his utopian crusading, sometimes with a typewriter in his lap, sometimes with a dictating machine at his elbow.

He finds the 24-hour day much too short for his needs, and he saves time by snipping substantial segments off his sleeping hours and his mealtimes. No matter what the season, he is busier than a bee among the bursting blossoms. Even in conversation he insists on speeding up the pace of the falling words. To everything he touches he gives a sense of immediacy and urgency that is irresistible. Even the leisurely delegates at the United Nations headquarters find that he speeds

up their tempo—and makes them like it.

His enthusiasm concentrates on two causes—world unity and calendar reform. He is perhaps the greatest living supporter and defender of the U.N.: certainly no other prominent disciple of international brotherhood is more confident of the success of the existing organization of governments or more hopeful of its eventual emergence into a puissant federation of nations. When in New York he haunts its corridors, a familiar and well-liked encouragement to all those delegates who are seeking to make the cumbersome apparatus work smoothly and effectively.

In his new volume, which will be used as a textbook in hundreds of American schools, he breezes through 7,000 years of man's efforts toward world unity. He calls it "the most wonderful story in all creation." It is the ageless drama of how man, by stretching out his hand toward his fellows, ceased to be a lonely savage in a forest clearing and became a citizen of the world, with all the nations of the earth as his next-door neighbors.

Even in the earliest days, inside a limited circle of organized life, man was working out ideas and institutions which were one day to become world ideas and world institutions. History, as Joyce views it, is a long story of progress in breaking down barriers, whether built by



How the Earth Looked to Eratosthenes, about 200 B.C. This Greek geographer, who lived in Alexandria, Egypt, imagined the world as a nice compact island surrounded by an ocean. Four great civilizations were developing in isolated parts of the island—Europe, Egypt, India and China. Each of them evolved their own calendar systems: those of Europe and Egypt later combined in the pattern adopted by Julius Caesar; those of India and China went their own futile way, and still survive in calendars used by various indigenous groups.

nature or by man himself: it tells of a constant reaching out—through discovery and invention, travel and communication—toward the other peoples of the earth. And each fresh step toward world unity is also a step towards greater freedom, food and friendship. “Without freedom, food and friendship,” says Joyce, “man cannot be fully happy or successful.”

The past, as Joyce chronicles it, teaches that every country and every people has had some important part in bringing about a united world. History shows that it is the *differences* between peoples which have made for true advance—whether in science or art, in welfare or government. All languages, colors of skin and ways of life have given something of lasting value to the sum total of human achievement on

this planet. So unity among nations need not mean uniformity. On the contrary, variety is the spice of life and the well-spring of progress.

“Nothing is more powerful than an idea whose day has arrived.” Joyce quotes this familiar sentence from Victor Hugo as he discusses the latest developments in the march toward world unity. And here it is pleasant to find that one of the movements which seem to him an essential part of world cooperation is the matter of “bringing the calendar up to date.” Rather than summarize his forceful presentation of this subject, it will be worth while to quote his exact words:

“I have spoken of some of the tough problems awaiting the kind of solution only a broader world friendship can bring. And each year loads the U.N.

Assembly's agenda with ever more items of world-wide interest. I give one striking example of the reforms which are being proposed—and which can only be carried through on a world basis.

"It is the proposal for a new World Calendar. Over 17 national governments have already favored a plan that our present lopsided calendar, which changes from year to year, should be made ship-shape and stable. The way to do this, say the experts, is to declare the 365th day a World Holiday.

"If enough nations agree, this extra day (two in Leap Year) is to be devoted each year to a world-wide celebration. It may be given some name like *Worldsday*. It would not be reckoned in with the ordinary weekdays, but would remain outside the week. This arrangement would mean

that the 364 days of the new calendar could be divided into equal quarters of 91 days each. In each quarter the months would run: 31 + 30 + 30 days. All the month-dates would fall on the same weekday from year to year, and this would save an enormous amount of confusion and waste of time and money in all nations. The same calendar would do for any year.

"The Panama delegate, in urging the United Nations to accept the new calendar, spoke of the value of the 365th day as a universal holiday. That day, he said, would everywhere be given over to celebrations, pointing to 'the unity of mankind, thus knitting all races, creeds, peoples and nations into a closer bond of fellowship and creating a world-wide citizenship in the One World.'"

THREE HUNDRED YEARS

By Elisabeth Achelis

IT was just 300 years ago that an inscription was placed on the cornerstone of an English chapel, dedicating the edifice to Sir Robert Shirley and testifying that he did "the best things in the worst times and hoped them in the most calamitous."

The world of 1653 and the world of today are similar. Europe was experiencing the difficult aftermath of war; governments, statesmen and leaders were turning their attention to remedying the conditions which had led to costly strife, hoping to prevent recurrence of such useless carnage and loss. It was Shirley's earnest purpose to uphold and maintain all that was true and good from being swept away by destructive forces.

Three hundred years later there are similar stresses, strains and confusions. And there are similar efforts by men of good will to foster world unity, cooperation and stability among nations and peoples.

This is the aim and goal of The World Calendar. It seeks to revise the present discordant system in which everything clashes, nothing agrees, and every time-unit wanders about in aimless fashion, creating confusion, difficulty and a continual loss of time, labor, material and money.

We propose a new perpetual and universal time system—wherein days and dates agree, wherein equality is established among the quarters and half-years, wherein national holidays can be conveniently fixed and a new world observance introduced—an annual international holiday dedicated to peace, unity and good will.

To those who would postpone action on the ground that the "time is not ripe" or that international councils are too busy with matters of immediate urgency, the example of Sir Robert is pertinent. Now, as in his day, we can well afford to do "the best things in the worst time and hope them in the most calamitous." There will never be a more appropriate time than *right now* for enacting calendar reform.

SCHOOL DAYS

By Eva Beard, Woodstock, New York

Here is a study of calendar reform from the viewpoint of New York State's educational leadership. Irregularities of the calendar are a perpetual headache to school administrators. The annual formulation of school calendars is a task involving so many compromises and adjustments that the state-wide result is invariably a mess. Calendar reform offers a prospect of uniformity that is ardently applauded by educators, and the National Education Association has been advocating The World Calendar for 15 years.

IN New York State, we are in the midst of a profound recasting of the educational pattern. About once a century the American school system undergoes such a change. As the sociologists point out, there is a "time lag" in our education; in other words, we never quite catch up with ourselves. There has to be a war, or a series of wars, to set the machinery in motion. In the mid-18th century the changes came with the end of French rule in America and the gradual acceptance of a new world calendar, the Gregorian. In the 1860s, they came with a hugely destructive Civil War and the establishment of the land-grant colleges. Now they have come again with the impact of the World Wars and the atom.

The new changes, whose shape we can thus far only dimly imagine, are not only inevitable, but they are coming much faster than in the past, for the atom will scarcely tolerate a long "time lag."

The State University of New York, as established in 1948, is a spearhead. Itself a sharp new instrument of an era of vast and rapid educational evolution, it has need of all the precision tools which it can command. And highly important

among the precision tools of the atomic age is the proposed World Calendar.

Most of us can best interpret educational trends in terms of our own experience. Vignettes, little documentaries of school days, flood back into mind when anyone mentions that troubled word "education."

Speaking personally, I have a clear-drawn mental picture of the ramrod-erect figure of the high school principal at the school year's beginning. This first day of school was—and is—on "the Tuesday after Labor Day." Labor Day was—and still is—always the first Monday in September. The 1st of September being itself a movable day-of-the-week, school thus might open on a Tuesday any time between 2 September and 8 September. For parents, children, teachers alike, end-of-vacation plans hung poised on this inescapable "day after Labor Day."

Before a blackboard facing the assembled students of one of the Empire State's many small, well-ranking high schools stood Mr. Wagsworth. Pointer in one hand, chalk in the other, he played what was to his young charges an amusing game—he was making out the term sched-

ule. Somehow, shifting this hour to that, this date to another, this class to morning or afternoon, this teacher here or there, he came out right enough every September. He remembered always about Thanksgiving and the Christmas holiday too. I am sure he needed his holidays and liked them. But probably not very much when he was schedule making.

After Christmas was even worse than the beginning of the school year, what with the mid-year examination period, Lincoln's birthday and Washington's, the itinerant Easter holiday. Mr. Wagsworth's annual blackboard performance seemed to me a fine feat at the time. Looking back on his composed and expert solving of his every-year, twice-a-year puzzle, it seems to me little short of miraculous. Yet it is a sort of mental acrobatics common to our school system from top to bottom—and imposed upon it, inexorably, by the machinations of our present unbalanced irregular calendar.

Omnipresent — too omnipresent, perhaps—was the date of "Regents," those end-of-term examinations set by the august body of that name, now 170 years old, which rules the New York State Department of Education. "Regents Rules" have the power and effect of law. It needed not the weight of history, for the very word "Regents" to inspire awe in the young. On the tide of "Regents" one rose or fell, made landing or was cast back for another long swim to a beachhead on that mysterious shore called "education."

Today the realm of the Board of Regents includes some 126 institutions of higher education, with an enrollment of 315,000; 1,100 secondary schools with 614,000 students; 5,900 elementary schools with 2,400,000; 650 registered

libraries; 120 museums; 190 historical societies. The State's public school system alone spends \$600,000,000 a year. All this operates under the disabilities, financial and otherwise, of an inconvenient calendar, whose second century we celebrated last year. The "Regents," one may note, have been functioning almost as long as our present calendar.

Under the Regents since 1844 is the State Library at Albany, whose collection of some 850,000 books and many thousand pamphlets and manuscripts makes it foremost among the nation's many important state libraries. Through an elaborate extension service, the greater part of this treasury of the world's knowledge is available on loan to libraries throughout the State, public or private, large or small. The complexities of operation of a great library are enormous; the savings possible in time and money are obvious, if a balanced, regular calendar such as the proposed World Calendar is adopted. When you add the savings in the public school budget, you might well be giving New York State taxpayers something to cheer about in the spring. One of our chief administrators says: "I am convinced that over the years there has been an incalculable waste of time, money, energy and nervous force because of calendar defects."

New York State schools have changed with the times. They are more flexible, with less emphasis on formal examinations. They offer richer, more varied fare. They are bigger, if not always better. Since that intrepid calendar maker, Mr. Wagsworth, ruled the order of his last school term, our town has doubled in size; the high school enrollment has much more than doubled. When war veterans, re-

COLLEGIATE CALENDAR DIFFICULTIES

As an example of the tribulations encountered by educational authorities in making up their annual schedules, Mrs. Beard submits the academic plan of Harvard University for the years 1952 to 1957. It was supplied to her by Dr. Kenneth John Conant, Professor of Architecture at Harvard, who comments: "It shows with uncommon clarity what the schools are up against with the present calendar."

	1952-3	1953-4	1954-5	1955-6	1956-7	<i>World Calendar: Every Year the Same</i>
Freshman Registration	Monday Sept. 15	Monday Sept. 21	Monday Sept. 20	Monday Sept. 19	Monday Sept. 17	Monday Sept. 18
Upper Class Registration	Friday Sept. 19	Friday Sept. 25	Friday Sept. 24	Friday Sept. 23	Friday Sept. 21	Friday Sept. 22
Academic Year Begins	Monday Sept. 22	Monday Sept. 28	Monday Sept. 27	Monday Sept. 26	Monday Sept. 24	Monday Sept. 25
Columbus Day Holiday	Monday Oct. 13	Monday Oct. 12	Tuesday Oct. 12	Wednesday Oct. 12	Friday Oct. 12	Thursday Oct. 12
Armistice Day Holiday	Tuesday Nov. 11	Wednesday Nov. 11	Thursday Nov. 11	Friday Nov. 11	Monday Nov. 12	Saturday Nov. 11
Thanksgiving Day	Thursday Nov. 27	Thursday Nov. 26	Thursday Nov. 25	Thursday Nov. 24	Thursday Nov. 29	Thursday Nov. 23
Xmas Recess Begins	Sunday Dec. 21	Sunday Dec. 20	Sunday Dec. 19	Thursday Dec. 22	Sunday Dec. 23	Thursday Dec. 21
Xmas Recess Ends	Sunday Jan. 4	Sunday Jan. 3	Sunday Jan. 2	Wednesday Jan. 4	Sunday Jan. 6	Tuesday Jan. 3
Fall Reading Period Begins	Monday Jan. 5	Monday Jan. 4	Monday Jan. 3	Thursday Jan. 5	Monday Jan. 7	Wednesday Jan. 4
Fall Reading Period Ends	Tuesday Jan. 13	Tuesday Jan. 19	Tuesday Jan. 18	Tuesday Jan. 17	Tuesday Jan. 15	Tuesday Jan. 17
Inclusive Days:	(9)	(16)	(16)	(13)	(9)	(14)
Mid-year Exams Begin	Wednesday Jan. 14	Wednesday Jan. 20	Wednesday Jan. 19	Wednesday Jan. 18	Wednesday Jan. 16	Wednesday Jan. 18
Mid-year Exams End	Monday Jan. 26	Monday Feb. 1	Monday Jan. 31	Monday Jan. 30	Monday Jan. 28	Monday Jan. 30
Second Half-year Begins	Wednesday Jan. 28	Wednesday Feb. 3	Wednesday Feb. 2	Wednesday Feb. 1	Wednesday Jan. 30	Wednesday Feb. 1
Washington's Birthday	Monday Feb. 23	Monday Feb. 22	Tuesday Feb. 22	Wednesday Feb. 22	Friday Feb. 22	Wednesday Feb. 22
Spring Recess Begins	Sunday Mar. 29	Sunday April 4	Sunday April 3	Sunday April 1	Sunday Mar. 31	Sunday April 1
Spring Recess Ends	Sunday April 5	Sunday April 11	Sunday April 10	Sunday April 8	Sunday April 7	Sunday April 8
Patriot's Day	Monday April 20	Monday April 19	Tuesday April 19	Thursday April 19	Friday April 19	Thursday April 19
Spring Reading Period Begins	Wednesday April 29	Wednesday May 5	Wednesday May 4	Wednesday May 2	Wednesday May 1	Wednesday May 1
Spring Reading Period Ends	Tuesday May 19	Tuesday May 25	Tuesday May 24	Tuesday May 22	Tuesday May 21	Tuesday May 21
Final Exam Period Begins	Wednesday May 20	Wednesday May 26	Wednesday May 25	Wednesday May 23	Wednesday May 22	Wednesday May 22
Final Exam Period Ends	Tuesday June 2	Tuesday June 8	Tuesday June 7	Tuesday June 5	Tuesday June 4	Tuesday June 5
Memorial Day	Saturday May 30	Monday May 31	Monday May 30	Wednesday May 30	Thursday May 30	Thursday May 30
Commencement	Thursday June 11	Thursday June 17	Thursday June 16	Thursday June 14	Thursday June 13	Thursday June 14

turning from World War II, could find no room in existing colleges, the town, with the aid of the State, produced almost overnight a place for them—a unit of the Associated Colleges of Upper New York.

Today, under the wing of the State but operating as an extension of New York City's famous New York University, this county collegiate center occupies the high school during off hours—late afternoons and evenings. It offers two years of college training and an excellent example of the functioning of New York State's pioneer concept of decentralized higher education. I hope Mr. Wagsworth knows all about this and especially about the new college in his home town high school. I can see him college-calendar-making from above.

World War II wrought profound changes in American ways of thinking. It shook our school system from top to bottom. But the impact of the earthquake was most felt on the higher tablelands of the colleges, the universities, the graduate schools. As the smoke of battle cleared, new forms began to appear; outstanding among them was New York State's long projected State University. Many educators regard this as the greatest educational advance since Abraham Lincoln, in 1862, signed the Morrill Act and established the land-grant colleges—Cornell University is one of these. In 1948, conscious of its new-age responsibilities, the Legislature of the richest and most populous state in the Union granted to its newly created university the broadest and most far-seeing charter of any state university in the country. Latest come of a long series of state universities, it is the first to be planned on a basis of decentralized units, self-contained, largely self-governing. The

State University of New York* is the first great new university of the atomic age.

As such, both Regents and Trustees recognize for it unique responsibilities and unique opportunities as pioneer in the field of higher education. If in any unit of its far-flung empire it is able to take a truly advanced position, its influence will extend beyond State borders; it can affect American thought and American education for years to come. Less burdened by the past than older establishments, it is more free, if it shows the capacity, to exert its influence toward lessening those world tensions whose end we cannot foresee. The Regents seek to make international understanding part of the training of every teacher of every subject, not merely of the teacher of citizenship. The Board has requested allocation of television channels for educational use; they plan an educational network throughout the State. Time conscious in the modern sense, they invoke new-age tools to speed

*With its strong emphasis on technology, it is the direct heir of the Morrill Act, which brought the land-grant colleges into existence and marked the first great break with the classical tradition in education. . . . Justin Smith Morrill (1810-1898) was a Vermonter who represented his native state in the lower house of Congress from 1855 to 1867, and in the Senate from 1867 until his death. Under his "land grant bill," each state received 30,000 acres of public land for each senator and congressman then in Congress. This land was gradually sold off by the states, and the money invested in a fund whose income goes annually to "colleges where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts." There are now 69 such institutions, receiving about \$1,000,000 a year from this endowment. The financial returns from the land grants have been disappointing, but the educational returns have been enormous. Probably no aid given by the national government to the states has proved more fruitful.

the ponderous, dragging wheels of "education."

One such new-age tool—the proposed World Calendar—is not yet theirs, however greatly needed. Master planning the thirty or more institutions of higher education directly under the State University, as well as all State aid institutions in this category, was a giant task.

Master planning from the State Comptroller's office included a financial survey at each of the University's units in order to standardize financial and business procedures, such as collection of fees and bookkeeping methods. Uniform budget and accounting methods throughout are the result of much conference between the President of the University and administrative officers. Smooth running machinery, within the limits imposed by human frailty and the exigencies of our present calendar, is thus assured for this highly complex new organization of the teaching and student world of a great State.

Some 40,000 students are today enrolled in the State University, which has a faculty of 3,000 and a physical plant valued at \$50,000,000. Its campus is the nation's largest. It stretches from the Canadian border southward to New York and Long Island, westward through the Mohawk Valley to the Niagara frontier, through the Southern Tier of counties to the shores of Lake Erie. No one of its units is new, except possibly the related community colleges at Middletown, Jamestown and New York City. The State University builds on a strong existing framework, coordinating, renewing, strengthening. Each unit has its own individual life, its extra-curricular activities—athletics, drama, music, etc.—whose cal-

endar involves now not only the community of which it is a part but also the calendar of the State University.

Each unit is to some extent a pioneer in its special field, with a long habit of pioneering—some of them were founded more than a century ago. It is not news for the Empire State to be striking out on new paths. A pathfinder of the mid-19th century was Edward Austin Sheldon, who brought to America, by way of the State Normal School at Oswego, the "object teaching" method of the great Swiss reformer, Pestalozzi. From Oswego radiated an influence which freed the children of the nation from bondage to textbooks and memorizing. My mother, a pupil and devoted admirer of Dr. Sheldon, heard with wonderment the 20th century din over "progressive" education. "Nothing very revolutionary about it all," said she. "Now Dr. Sheldon used to tell us—"

Another pathfinder, directly connected with today's trends both through his enthusiasm for the State Library and through his persistent advocacy of calendar reform, was Dr. Melvil Dewey of the Lake Placid Club. While still in his twenties, he started a *Journal* for librarians, and followed this by founding the American Library Association and the first school for librarians. The latter became part of the New York State Library, which Dewey reorganized and directed for fifteen years, making it the leading institution of its kind in America and establishing the system of traveling libraries and picture collections. More than any other single individual he was responsible for the sound development of library science in America.

Later, Dewey served for a decade at the head of the State school system. As one

of the nation's leading educators, his support of calendar reform was tremendously influential in schools and universities. It was he who first stirred the interest of Miss Elisabeth Achelis (although they did not always see eye to eye on the subject), and thus led to the founding of The World Calendar Association and the far-flung international movement which it developed.

It was Melvil Dewey who originally pointed out to educators that "the calendar should be brought within the framework of orderly arithmetic." A perpetual calendar, he argued, would enable teachers to work out their educational almanac, not only for the current year, but for years to come. In fact, many arrangements would be as perpetual as the calendar itself.

Perhaps it had seldom occurred to the average teacher that calendar difficulties were remediable. But today they know better. They are highly interested in the current proposals for calendar reform, because these changes will cure most of the existing difficulties in school calendars, stabilizing all school dates and rendering them permanent, so that once a satisfactory school calendar is worked out, it can be universally adopted and made to stand, year after year, immutable and invariable. It is astounding what advantages of symmetry and regularity appear in the school year once the suggested changes in the civil calendar are applied to the educational almanac.

A study made at the University of Illinois (22,000 students, 4100 faculty) shows this very clearly. The report says in part:

"Calendar planning in any school or college involves much more than just a

classroom schedule. It covers also sports events, meetings of many kinds, gatherings of teachers, parents, alumni, and people from all walks of life with interests or connections on the campus. Advance arrangements for small or large groups demand meticulous care and study. Any day or date cannot be arbitrarily selected. Many things must be taken into consideration. Last year's plans or schedules cannot be followed because no week, month or year is the same under the irregular calendar.

"The selection of an ill-timed date will mean the difference between a successful meeting, profitable to many, and one poorly attended. The wrong date will mean the difference between a cooperative and helpful gathering and one teeming with impatience, lacking in attention, ending in failure. Dates do make a difference.

"Too many of our educational facilities and services fail in their full usefulness because a time convenient to all is not easy or practical to establish. Irritating and inconvenient dates breed disinterest."

At the University of Illinois, registration dates have varied in recent years from 13 September to 6 October. Thanksgiving holidays are sometimes five days long, sometimes only a single day. Christmas holidays have varied from 12 to 20 days. The weeks of instruction have been as high as 30, and as low as 27. These differences are largely due to the calendar—for annual weeks of instruction must be kept at a total that will avoid overcrowding of instruction hours, with a constant eye on holidays, long and short week-ends and special days of various kinds.

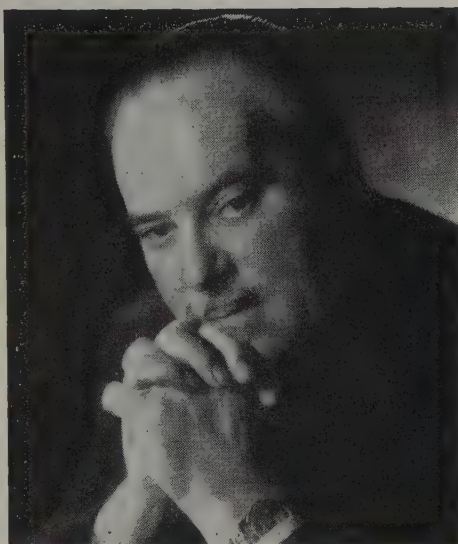
TIME PROBLEMS IN STATISTICS

By S. J. Noel-Brown, London

EVERY professional business consultant is all too familiar with the calendar problem. Whatever industry he is dealing with, whatever type of business he is invited to advise upon, sooner or later—usually sooner—he encounters the question of time-division. It may be an analysis of production costs, a search for suspected time-lag in distribution, or the devising of a long-term program of research—or any other facet of procedure. Where it is—the problem of reconciliation of differing month-lengths and working-day periods with a true time-schedule of weeks, months or years—or all of them at once.

At this point the cost accountant comes up squarely against the irregularities of the current system of time measurement and the possibility of correction or improvement. I have given some thought to the subject, and my conclusion is that the World Calendar proposal offers a ready solution of most of the difficulties. Let us take the case of standard costing.

One of the leading firms of business and industrial consultants in Great Britain is S. J. Noel-Brown and Co., Ltd., of which the author is Managing Director. Among his associates are the Earl of Norbury, Chairman, and Air Chief Marshal Sir Edward Peirse. The author is a former president of the British Society of Cost Accountants and chairman of the Council of the Association of International Accountants. His firm has done much important work in the British aircraft industry, and he has written several authoritative technical books, including the well-known *Economics of Air Transport*.



S. J. Noel-Brown

(This is a system developed by production executives and accountants for precise analysis of pre-production costs. It supersedes the traditional method of working out "average cost" of a particular item of production over extended periods of time and is in a way a device which has arisen particularly out of calendar difficulties. It lends itself to more accurate analysis than the former and more obvious method, and is frequently carried out with such precision as to require nine places of decimals. It is in fact a phase of the movement toward scientific work-costing in relation to time, the governing factor in all production problems.)

In order accurately to apportion annual

expenditure over respective months of varying lengths, it is necessary first to determine the weeks in a standard month as follows:

Days in year: 365

Weeks in year: $365 \div 7 = 52.1428571$

Weeks in standard month (1/12 of year):

$52.1428571 \div 12 = 4.345238$

Thus standard cost for a 28-day month = Standard

cost for standard month $\times 0.920547948$

For a 30-day month, standard cost would be:

Standard cost for standard month $\times 0.986301325$;

For a 31-day month, standard cost would be:

Standard cost for standard month $\times 1.019178741$.

This is a very cumbersome procedure, by no means simplified if Sundays and the whole or part of Saturday (or any other weekday) are excluded from the calculations.

With The World Calendar in use and so with each month having 26 working days, it would be possible to divide annual expenditure into 12 equal parts with an assurance of accuracy. A slight complication would ensue if the cost had to be spread over Monday to Friday inclusive as in this case there would be 22 working days for eight of the months, and only 21 in the remaining four.

Perhaps the most important implication from the point of view of standard costing is that with The World Calendar each quarter is identical. At present, whatever periods are selected for comparison, there are discrepancies in the actual number of days. Even 13 periods of 28 days leave one day unaccounted for—and though some firms have been driven to use this method, it is artificial and complicated inasmuch as it is necessary to prepare a special calendar so that such expressions as "period 8, week 3" can be understood.

The most commonly used system is probably what is known as 4-4-5, that is to say, two four-week months are followed by one five-week month. Whatever day of the week is chosen from which to start

or finish the so-called "month," it rarely tallies with the existing calendar. For instance, referring to Table "A," it will be noted that there are eight cases throughout the year 1953 where the present calendar follows the cycle 4-4-5. These are:

Mondays: 1st and 2d Quarters;

Tuesdays: All four Quarters;

Wednesdays: 4th Quarter;

Sundays: 1st Quarter.

Incidentally, it will be seen that there are only 12 Wednesdays in the 1st Quarter, but 14 in the 3d Quarter; while there are also 14 Thursdays in the 4th Quarter. Any system involving allocation of costs which starts or finishes on a Thursday, takes place 53 times during the year instead of 52. With The World Calendar, each day would occur 52 times throughout the year and any day would be as

TABLE A
1953

NUMBER OF TIMES SPECIFIC DAYS RECUR WITHIN
SPECIFIC MONTHS

	MON.	TUE.	WED.	THU.	FRI.	SAT.	SUN.
JAN.....	4	4	4	5	5	5	4
FEB.....	4	4	4	12	4	4	4
MAR.....	5	5	4	4	4	4	5
APR.....	4	4	5	5	4	4	4
MAY.....	4	4	4	4	5	5	5
JUNE.....	5	5	4	4	4	4	4
JULY.....	4	4	5	5	5	4	4
AUG.....	5	4	4	14	4	5	5
SEPT.....	4	5	5	4	4	4	4
OCT.....	4	4	4	5	5	5	4
NOV.....	5	4	4	4	14	4	5
DEC.....	4	5	5	5	4	4	4

good as any other day as the start or finish of a costing period, and comparable figures, monthly or yearly, would readily be obtained.

This applies also, of course, to the apportionment of actual or expected expenses for estimating, budgetary control or any other purpose calling for comparison or financial allocation.

Planning and Production Control. Another defect of the present calendar is

that there are a varying number of working days to the various months and this causes difficulty when planning production, making delivery promises, arranging procurement schedules, machine lading, and so on.

For instance, as will be noted from Table "B," on a 5-day working week, the number of working days per month varies from 20 to 23, on a 5½-day week from 22 to 25 and on a 6-day week from 24 to 27. These are considerable deviations, and where output per machine hour or per

obtained when production plans, delivery schedules or machine loads are prepared graphically on a Gantt or similar chart. It is our view that more widespread use of visual graphs and charts is prevented by the complexities arising out of the variations in the number of working days contained in the present months.

This is seen in the statistical data and current trade information issued by government departments and official bodies. Qualifications have frequently to be made for monthly statistics noting that allowance must be made for the fact that there were more working days in a given month this year than last.

Such variations require special treatment in the preparation of charts dealing graphically with production schedules and often limit their efficiency.

The present calendar also causes considerable difficulties in the case of long-term planning of, say, aircraft programs, civil engineering contracts and the like. Calendars are normally available only one year ahead, and often others must be specially prepared to meet planning in excess of that period.

To meet this situation, we have found it necessary to prepare for our own use a complete calendar for the years 1901 to 1999. This is shown in Table "C."

The method of using this long-term calendar is simple. To find on what day the 31st March will fall in 1962, find the year in the block on the top left-hand side, then follow the line to the right till you come to the letter "D" under March. Reference to Table "D" on this chart shows that the 31st March 1962 will fall on a Saturday. Conversely, to find when Christmas Day next falls on a Sunday, first note the table on which the 25th is

TABLE B
1953

NUMBER OF WORKING DAYS PER MONTH
(Excluding Deductions for Holidays)

	5-Day Week (Mon.-Fri.)	5½-Day Week (Mon.-Fri.) plus Sat. a. m.	6-Day Week (Mon.-Sat.)
JANUARY.....	22	24½	27
FEBRUARY.....	20	22	24
MARCH.....	22	24	26
APRIL.....	22	24	26
MAY.....	21	23½	26
JUNE.....	22	24	26
JULY.....	23	25	27
AUGUST.....	21	23½	26
SEPTEMBER.....	22	24	26
OCTOBER.....	22	24½	27
NOVEMBER.....	21	23	25
DECEMBER....	23	25	27

operator hour is standard, the volume of production during the month varies in direct proportion to the figures quoted.

This has yet another implication. In many industries it is customary to have a monthly production target or pay a monthly bonus. If, when the number of working days in the month are fewer, the target is allowed to remain the same, the percentage achievement will probably be less and work people will be disgruntled. If the target is reduced the operatives may think that less effort is required, and the target may not then be reached.

The most striking illustration of the complications of the present calendar is

CHRONOMETRY for an ATOMIC AGE

By Earl T. Strickler, F.R.S.A., F.B.H.I.

Secretary of the National Association of Watch and Clock Collectors

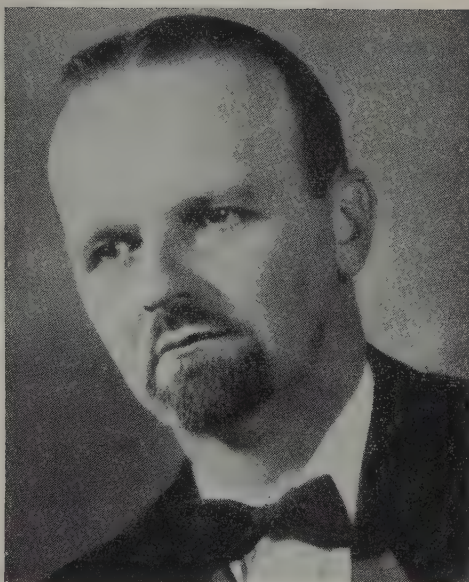
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HOROLOGY (which deals with all aspects of time measurement) is a science, and science is personified perfection. Horologists for centuries have been perfectionists; they have lived by and for the principle of establishing a means for the "keeping of time" correctly. In recent years they have endeavored to, and have succeeded in, splitting the second into thousandths and millionths, and have perfected fabulous devices to measure such infinitesimal periods of time.

The other day the National Academy of Sciences awarded a prize to Dr. Harold Lyons of the Bureau of Standards because he had invented a clock which will neither lose nor gain more than a second in a million years and which is unaffected by changes in temperature and pressure or by aging. Dr. Lyons' clock is a thirty-foot copper tube filled with ammonia gas. With its aid the accuracy of astronomical observations, long-range navigation and communication systems, surveying, map making and radio tuning will improve.

For generations the rotating earth has

Among American horologists, the author is the only one who has been internationally recognized by fellowships in the British Horological Institute and the Royal Society. As an authority on Japanese timepieces he has been awarded membership in the Horological Institute of Japan. He is member-at-large for Pennsylvania of the United Horological Association of America.



Earl T. Strickler

been the world's standard clock. When the astronomers consulted old tables they found the earth was slowing down because of the braking action of tides in shallow seas. Other causes also contributed to the mounting error. In the early 1870s the day was shorter than average by a few thousandths of a second; about 1900 it got a little longer; in 1920 it began to shorten. On the whole, the day is lengthening by about 0.001 second in a century. This may seem a negligible error to most of humanity. An astronomer is as disturbed

by it as much as we are when we discover that our watches gain or lose a minute or two in a week. When the astronomer calculates the time of a total eclipse of the sun twenty centuries ago he has to make a substantial correction.

Just why is ammonia a better time-keeper than the earth? All atoms in molecules vibrate, and their vibrations appear as lines in the molecular spectrum. Each line indicates a specific frequency of vibration, just as a tuning fork emits a note of a particular pitch. It is possible to measure these atomic vibrations with precision. Here is a clock so much more accurate than the slightly erratic earth that henceforth much timekeeping trouble will be avoided. It looks very much as if the high frequencies used in radar, television relays and microwave equipment will be controlled by vibrating atoms. This ought to be a boon to broadcasting companies, for it will be possible to establish radio channels so exactly that tuning can be made as automatic as the dialing of a telephone number.

In spite of the great advances made by science in measuring infinitesimal segments of time, our present-day horologists are "small" in their outlook, for while troubling themselves with the little measurements of time, at great cost, they have deliberately overlooked the big measurement of time—the calendar—and left its fate to be decided by those who are outside the pale of horological technology—men such as emperors, church potentates, and idealists.

The task of searching for a better calendar has occupied and employed the best minds of many civilizations; savants and scientists alike have striven to improve that which they recognized as being weak

and inept. Change has never been quick—the Julian Reform was but the culmination of over 200 years of agitation, and Roger Bacon pointed out the advantages of Calendar Reform some 300 years before Pope Gregory instituted our present calendar. We can delve into antiquity even deeper: Caesar used Ptolemy III's decree of Canopus, establishing leap year, 193 years after its inception, in 238 B.C.

A famous historian says that it is a profound fact that the people do not take kindly to new ideas; that improvement is resisted through a normal expression of the force of habit. He does not add that this general statement does not apply to horologists, the most advanced of all technicians in method and policy.

Progress in horological science has been remarkable—and just as remarkable has been the retrogression of horologists where the calendar is concerned. I use the word retrogression advisedly, for Webster tells us it means the contrary direction to the natural course and order.

Many vicissitudes have beset the calendar since it was first conceived; for us this is a fortunate circumstance, for from cumulative chaos and confusion comes the need and adoption of ultimate reform.

The first calendar that historians know about, the Egyptian, ran into trouble as soon as it was adopted: using the 365-day year, it wandered haphazardly along, until the Romans, dissatisfied with their multi-century confusion, combined the pitifully few advantages of both the Egyptian system and their own, and introduced the Julian revision, which was to remain in use for 1600 years.

We think of "graft" as a modern idea formulated by our own ingenious politicians, but it existed in lusty form among

the ancient Romans, with some of its most magnificent manifestations centering around the irregularities and inadequacies of the calendar. In 452 B.C., the Roman Supreme Court set up their old-fashioned calendar on stone tablets in the Forum, and directed the College of Pontiffs to supervise it and to promulgate an occasional extra month, a necessary intercalation: the pontiff-politicians used this privilege for their own selfish ends; calendar adjustment became the plaything of crafters and office-holders, and many social evils were the result.

With the advent of the Christian Era, and its new hope for mankind, much scientific endeavor lay dormant. One notable exception was the group of contemporary astronomers, the horologists of their day, who preserved enough "know how" properly and authentically to determine the religious holidays. The Julian calendar counted the year as 365.25 days, while we know it to be 365.2422 days, with the result that Easter fell back one full day every 128 years. In 1,280 years the loss was 10 days, and churchmen realized that eventually Easter would fall on the same day as Christmas. Roger Bacon was cognizant of this error; several hundred years later, 1514, the great horological mathematician Copernicus was consulted about it, and, much like his counterparts today, he shied away from giving it a clear and concise answer with the excuse that he didn't, in effect, think the time was ripe for a change.

In 1582 Pope Gregory XIII introduced the present calendar in the Catholic countries, but simply because it was introduced by the Catholic hierarchy and because the great Protestant reform movement was in its ascendancy, northern

nations refused to cooperate. Great Britain, the then leader of the world, did not adopt it until 1752, and here the necessary shifting of New Year's Day from 25 March to 1 January proved a terrific stumbling block. Neither this change nor the dropping of eleven days were understood by the man in the street.

What are the defects of the present calendar? They are legion, and in the words of a leading exponent of The World Calendar are: "primarily disorder and planlessness—a jumble of varying parts loosely hung together in a haphazard way." How shameful that we, as horologists, men who strive for perfection in the measuring of time and in the devices for such measurement, accept such a slipshod and distasteful method of keeping track of the larger units of time. Modern conditions call for modern systems. Progress dictates that we discard outworn customs and prepare for the change which is the order of the day. Under our present calendar there are these defects:

1. Fourteen variations of calendar years.
2. Twenty-eight different kinds of months.
3. In irregular order 7 months of 31 days, 4 months of 30 days, 1 month of 28 or 29 days.
4. Quarters and months begin on any day of the week.
5. Quarters are unequal in length.
6. Each quarter has irregular months, weeks and days.
7. Each month begins and ends on a different weekday.
8. Days and dates *never* agree from year to year.
9. Holidays vary in days and dates.
10. Years begin on different weekdays.

What are the advantages of The World Calendar? Plan and order are the chief essentials, and The World Calendar is a prototype of the dials of clocks and watches with their regular hours of 60 minutes,

divisible into equal half, and quarter-hours. Just as the clock and watch dials are reliable and unchanged, so will be The World Calendar. In contrast to the present calendar we have:

1. One unvarying calendar year.
2. Three regular kinds of months in every quarter-year.
3. The first month has 31 days, the remaining two have 30 days each—a rhythmic pattern of 31, 30, 30; 31, 30, 30; 31, 30, 30; 31, 30, 30.
4. Quarters always begin on a Sunday, and end on a Saturday.
5. The quarters are equal in length.
6. Each quarter contains 3 months, 13 weeks, or 91 days.
7. Month-dates always fall on the same weekdays. Each month has 26 weekdays, plus Sundays.
8. Days and dates always agree from year to year.
9. Holidays are fixed.
10. Each year begins on Sunday, 1 January, and the working year on Monday, 2 January.

How do calendar irregularities affect us personally? A little thought will reveal dozens of examples of inconvenience in our personal or business affairs. I will mention just a few that occur to me.

Take for example the annual computation of income tax. Under The World Calendar, income tax day will come on Friday every year. Thus we will have the advantage of a full work week in which to get our accounts in order and to submit our payment. Those who work for an employer on a weekly basis will no longer have to pay tax some years on 53 pay days, because every year will have exactly 52 pay days.

Consider Labor Day. Under the present system, it may fall anywhere between 1 September and 7 September. If on the first, the summer is shortened and everyone loses; if on the seventh, school and work schedules are distorted, and lost

time must be made up by all sorts of awkward devices. Under The World Calendar, Labor Day will fall on the happy medium, 4 September, every year.

With The World Calendar, Election Day will always fall on Tuesday, 7 November, thus permitting the full extent of campaigning by candidates. If a family birthday or anniversary falls on the changed dates from 31 March, 31 May and 31 August to the 29, 30 February and 31 April dates, you will observe them on the day before, much as do those who are born in leap year on 29 February. This will only be necessary for this generation which is affected by the change. From adoption date on, birthdays will be recorded not only on the date, month and year, but also the actual day of the week.

One of my friends, who is a stockholder in a printing firm which produces millions of calendars every year, wonders if the calendar printers will lose a lot of business when the new perpetual system comes into effect. I think not. Clock and watch makers are doing a flourishing business despite the fact that clock and watch dials are never changing. Diaries, notebooks and calendar pads which print the moon's phases call for annual printing, notwithstanding the permanent nature of The World Calendar, and there will always be a demand for different designs and materials. More than ever before, calendars will become objects of artistic design—because of their permanence. They will be made in bronze, silver and gold, for use on wall or desk.

Will horologists benefit in a business way? Certainly they will, for innumerable calendar clocks will need alteration, and there will be a largely augmented sale for new ones.

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EDITORIAL PARAGRAPHS

How come that a society which has developed the atom bomb is still creaking along with a wasteful hodgepodge calendar that has remained fundamentally unchanged since the horse-and-chariot days of Julius Caesar?—*Paramus (N. J.) Clarion*.

Our present calendar has grasshopper dates. The World Calendar offers vast economic savings. And with the current cost of living, that term "economic savings" has a purse-warming appeal.—*Midland (Ontario) Free Press Herald*.

Arch villain blocking the path to calendar reform is Old Man Apathy. This gent has delayed many a change for the better in human affairs, but he has seldom thwarted completely any change that made for the successful forward-march of the human race.—*Burlington (Vt.) News*.

Indian calendars are in a pitifully confused state and the time has come to decide on a more rational basis.—*Bharat Jyoti, Bombay*.

Yes, The World Calendar would simplify living and would benefit labor, business and the professions. Approximately two billion dollars a year would be saved in the United States by this simplification in accounting and in stabilizing holidays.—*Oneida (N. Y.) Dispatch*.

Proposals of The World Calendar Association are mainly directed towards the unification of all business, social and governmental statistics.—*Nottingham Journal*.

Both business and labor protest against the vagaries of the present calendar. They cause inconvenience and loss throughout economic life.—*Ottawa (Canada) Citizen*.

If any important segment of our population becomes convinced that it will profit from a change in the calendar, there is every likelihood that the change will come. But most people don't see any immediate gain

to themselves in it. However, the only important opposition is apathy and disinclination to change anything that has become traditional.—*Wapekoneta (Ohio) News*.

The World Calendar has a good chance of taking over. If American delegates to the UN hadn't been so stuffy, it might have gone into effect two years ago.—*Indianapolis (Ind.) Times*.

Everyone in the newspaper industry is fully conscious of the existing irregularities of the calendar.—*Mail, Dublin, Ireland*.

Strong supporters of The World Calendar include some of the foremost leaders of most of the great religions, both lay and clerical. Nearly all informed business executives and statisticians endorse the reform.—*St. Petersburg (Fla.) Times*.

Current proposals for changes in the school year should be carefully examined in the light of international efforts toward revision of the Gregorian calendar.—*La Presse, Cherbourg, France*.

One calendar for all peoples may mean a long step toward the goal of international understanding and good will.—*Redding (Cal.) Record-Searchlight*.

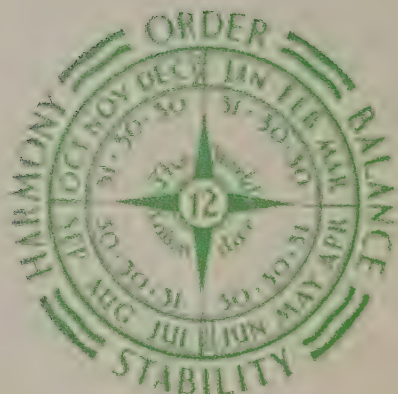
Adoption of The World Calendar will save the business world millions of pounds and will make accounting far simpler.—*Natal Witness, Pietermaritzburg, South Africa*.

There is no doubt The World Calendar would eliminate many of the economic and social drawbacks of the present calendar.—*Decatur (Ill.) Herald*.

Once again the movement for the much desired reform of the calendar is gaining momentum.—*Ecclesia, Madrid*.

Everybody will benefit from adoption of a world calendar.—*Colonist, Vancouver, B. C.*

The World Calendar Association, Inc., will gratefully receive contributions for furthering its work. Such contributions are tax exempt under Federal and New York State Income Tax laws.



After reading please pass on to others.

Journal of
CALENDAR
REFORM

HAYDEN PLANETARIUM EXHIBIT

September 1953

THE WORLD CALENDAR

1ST
QUARTER

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

2ND
QUARTER

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

3RD
QUARTER

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

4TH
QUARTER

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

Worldsday, (a World Holiday), W or 31 December (365th day), follows 30 December every year.
The Leapyear Day, (another World Holiday), W or 31 June, follows 30 June in leap years.

In this Improved Calendar:

- Every year is the same.
- The quarters are equal: each quarter has exactly 91 days, 13 weeks or 3 months; the four quarters are identical in form.
- Each month has 26 weekdays, plus Sundays.
- Each year begins on Sunday, 1 January; each working year begins on Monday, 2 January.
- Each quarter begins on Sunday, ends on Saturday.
- The calendar is stabilized and perpetual, by ending the year with a 365th day that follows 30 December each year, called Worldsday dated "W" or 31 December, a year-end world holiday. Leap-year day is similarly added at the end of the second quarter, called Leapyear Day dated "W" or 31 June, another world holiday in leap years.



ONE WORLD CALENDAR FOR ONE WORLD

VOL. XXIII

SEPTEMBER 1953

No. 3

DURING the next two years, a million people will inspect an ingenious graphic explanation of calendar reform at the American Museum-Hayden Planetarium. This visual study of the subject is part of a large exhibit entitled "The World Calendar and The World Clock," occupying about 50 running feet of wall space along the main corridor of the Planetarium. The left-hand half of the exhibit deals with the proposed World Calendar and its advantages; the right-hand half is an explanation of the operations of Standard Time around the world.

The Hayden Planetarium, at 81st Street and Central Park West, was established in 1935. It constitutes the *Department of Astronomy* of the American Museum of Natural History. Lectures are given several times daily, every day in the year, on various phases of popular astronomy. It is fitting and appropriate that such an institution should undertake to popularize a knowledge of the calendar and its current imperfections. Astronomers have always been in the forefront of calendar reform, since the days of the priestly stargazers of Babylonia, Phoenicia and Egypt—and their successors, Sosigenes, Omar Khayyam and Scaliger.

The modern movement for revision of the Gregorian calendar was sparked by Camille Flammarion, the great French astronomer, in the 1880s. He had the backing of the powerful French Astronomical Society, and he also found enthusiastic support among colleagues in other countries. In England, the secretary of the Royal Astronomical Society wrote the first comprehensive book on calendar reform. Swedish astronomers took their lead from Svante Arrhenius, the country's greatest scientist, and prevailed upon their Academy of Sciences to study measures for handling the transition from old to new calendars. In America, the director of Lick Observatory became a persistent critic of the Gregorian system and an ardent advocate of the Flammarion proposal and its successor, The World Calendar.

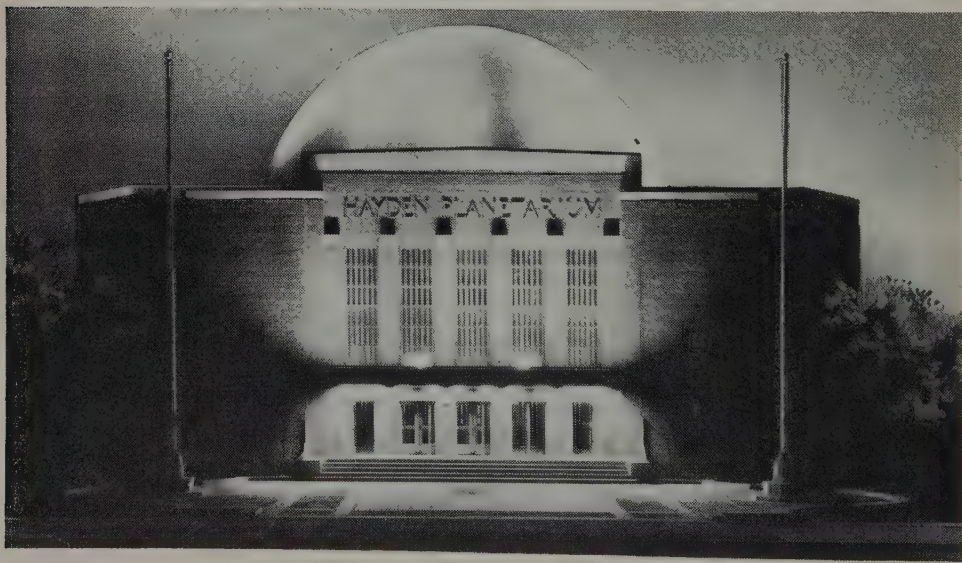
After Flammarion's death, the International Astronomical Union took over his life-long crusade, climaxing its work with a 1922 meeting under the distinguished presidency of Cardinal Mercier, where the defects of the Gregorian calendar were thoroughly explored and remedial measures drawn up for action by world govern-

ments. Since that time, astronomers have continued to be leaders in the movement. In France, Professor Paul Couderc of the Paris Observatory has written a college textbook on the subject; in England Sir Harold Spencer Jones, Astronomer Royal (of Greenwich), is proving a tower of strength to the British Section of The World Calendar Association; in the United States, astronomers long ago organized their own society to advocate revision; in Canada the Royal Astronomical Society has repeatedly emphasized the subject both in its annual meetings and in its excellent *Journal*; in Japan the Osaka Planetarium provides personnel and office space for the movement; in India, calendar revision is linked with an official plan for establishment of a new government observatory; in China the head of the organization was the astronomer Dr. Ching-Sung Yü, now at the Harvard Observatory in Colorado.

There is a happy relevancy in the Planetarium's decision to exhibit together The World Calendar and The World Clock. The adoption of Standard Time in 1883 was a reform which had been argued and urged persistently for 50 years prior to that time. It had a far-reaching and beneficial influence upon the lives and habits of human beings everywhere.

So the Planetarium Exhibit shows "a reform accomplished and a reform desired." It marks the 70th anniversary of the adoption of Standard Time. It also reflects the hope held by many that the world may shortly adopt a new and improved calendar. In this respect, it is apropos to quote again the words of Sir Harold Spencer Jones, England's foremost astronomer: "This reform is urgent international business: proposals for enacting it are now before the United Nations, and it is to be hoped they will be seriously considered on their merits."

The Planetarium's exhibit will open in October, with appropriate ceremonies.



Journal of

CALENDAR REFORM

SEPTEMBER 1953

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Charles D. Morris, Editor

Linda Halsted, Associate Editor

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AUSTRALIA MAKES A FRESH START

REOrganization of the calendar reform movement in Australia is under way on a broad basis. The new committee will embrace representatives of each of the six states of the Commonwealth, plus a delegate from the Capital Territory (Canberra). In due course the interstate members will build up local committees in order to get the most effective possible coverage of the entire country. Membership of the Central Committee, although not yet complete, includes the following:

H. J. M. Abraham, astronomer, Commonwealth Observatory, Canberra.
 E. W. Bell, founder of Loss Assessors Assn., Sydney, New South Wales.
 H. H. Cummins, chartered accountant, Hobart, Tasmania.
 Inigo Jones, F.R.A.S., meteorologist and astronomer, Brisbane, Queensland.
 John K. Lavett, Commonwealth Life Assurances, Sydney, New South Wales.
 J. E. Marr, systems consultant, Sydney, New South Wales.
 R. W. Parsons, School of Mines, Adelaide, South Australia.
 Prof. A. D. Ross, sec'y., Pan Indian Science Assn., Perth, Western Australia.
 C. F. Walker, educator, Box Hill School, Melbourne, Victoria.
 H. Wood, astronomer, Sydney Observatory, New South Wales.

With the addition of a few more representative members, the Central Committee will be ready to undertake an intensive program of education and research. Its first project is a preliminary survey of the viewpoints of the 100 leading organizations in the Commonwealth, including business, education, science and labor. It is expected that a majority of these 100 organizations will be enlisted in support of the movement, as the ground for such cooperation has been prepared by the formal approval of a committee of the Australian National Research Council, an impartial advisory body whose recommendations are especially valuable not only because of its official status but also because of its objective outlook.

Some years ago, a special committee of well-known scientists was appointed by the National Research Council to investigate and report on calendar reform. The setting-up of this committee was predicated on a general agreement that the existing calendar is "out-moded, uneconomical and inefficient in its application." After an intensive study of many reform proposals, the committee decided that the revision of the present calendar was a necessary measure, and that of the various alternatives available, The World Calendar was the best. Having thus completed its task, the committee was recently disbanded.

Its unfinished work has now been taken over by the new Central Committee, which will function as the Australian Section of The World Calendar Association. A statement issued by the Honorary Secretary, John K. Lavett, says: "Our main aim is to carry on the work of achieving calendar revision by directly furthering a knowledge of The World Calendar. International approval of The World Calendar, besides its undoubted value to business, science and everyday living, will provide an over-all unifying force in the interest of World Peace."

SIGNIFICANT RUSSIAN APPROVAL

By Leo Gruliow

Editor of The Current Digest of the Soviet Press, Published by American Scholars as a Reference Source for Researchers and Analysts

ON July 19th a brief news item in *Pravda*, *Izvestia* and other Soviet newspapers recorded without comment the fact that the Russian government has decided to support study of calendar reform as proposed by The World Calendar Association.

Laconic as it was, the mere appearance of this item in the heavily censored Soviet press suggests that Russian interest in calendar reform may be stronger than hitherto anticipated.

The item was simply headed, "In Council of International Organization for Standardization." It said:

Geneva, 18 July (Tass)—A meeting of the Council of the International Organization for Standardization ended a few days ago. A representative of the Standardization Administration of the U.S.S.R. State Planning Committee took part in the meeting. Problems of development of international standardization were discussed.

Among other things, the council approved a proposal supported by the Soviet representative which called for study by the I.S.O. of suggested reform of the Gregorian calendar.

The council settled a number of organizational questions. It adopted a proposal by the Soviet representative to establish Russian, French and English as equal working languages at the meetings and correspondingly altered the I.S.O. by-laws. On a motion by the U.S. representative, the council elected the Soviet representative as a new member of the advisory committee.

Details of the session and the part played by the Soviet representative,

Igkourakov, have not yet been published in Russia. But the mere appearance of this brief item in the top-ranking Soviet papers, noncommittal though it be, is significant in itself. Occasionally one of the lesser Russian dailies may carry a news story purely for its interest to readers, but this lack of motivation is almost never evident in major newspapers such as *Pravda*, *Izvestia* or *Trud*. Certainly nothing ever appears simultaneously in the entire string of top papers without the most careful policy consideration by the government and without express orders indicating that the material is regarded as deserving the utmost attention. Soviet newspapers have only four pages and they usually devote only one of these, the back page, to foreign news. No item can make its way into this limited space in all the leading dailies at once without the highest scru-

On current developments in Russia, Professor Gruliow is undoubtedly the best-informed man in America. With a staff of 15 assistants, he occupies a small building on the Columbia University campus, where every week he receives by air mail approximately 80 Russian newspapers and magazines, to be carefully read and combed for information. The most important articles are translated and rushed into the Committee's weekly magazine, often only three days after they have appeared on the Moscow newsstands. A subscription to the *Current Digest* (about 50 pages per issue) costs \$150 a year, making it one of the most expensive periodicals in the world. Professor Gruliow is a former Washington journalist, who was America's Russian War Relief representative in Moscow during the war.

tiny and approval. Foreign news usually is censored by foreign policy officials, then selected by editors under instructions from the Kremlin, and finally censored again both before and after printing.

That is why the appearance of this item carries more importance than meets the eye. Clearly, in the new regime's effort to impress the world and its own people with the "cooperation" and "co-existence" line, every instance of Soviet participation in constructive international agencies gets a heavy play. But, quite aside from this, there is no reason to doubt that Russia is interested in calendar reform for practical reasons of her own.

Calendar reform would be nothing new in Soviet Russia.*

* Up to the end of the 15th century, the Russian year began on the first of March. Years were counted "from the creation of the world," and this event was placed at the year 5509 B.C. From about 1500 to 1700 the Moscow kingdom started the year on September first. Peter the First, about 1700, introduced the reckoning of years from 1 January, and adopted the *Anno Domini* era, but in doing this he encountered priestly opposition from the Byzantine Church. Pope Gregory's reform had been summarily rejected as "a harmful innovation of the Church of Rome, a Latin heresy and a fiction of Roman star-gazers." . . . The first printed calendars in Russia appeared about 1709. Adoption of the Gregorian calendar was under active discussion throughout Russia from about 1800. The Academy of Science recommended it in 1829; the Russian Astronomical Society revived the project actively in 1899 on the basis of a report from a renowned American astronomer, Professor Simon Newcomb of Washington. It also gave intensive study to proposals for more sweeping changes, including Auguste Comte's 13-month plan, De Petenyi's scheme for a decimal calendar and the French Armelin equal-quarter revision which was almost identical with the current World Calendar plan. Leo Tolstoy was an advocate of revision, urging that "the eloquent demand of our century and of modern life will not stop before any difficulties, and therefore undoubtedly a practical solution of the calendar question is pending."

Because of the differences of views between the Russian Orthodox faith and the Roman Catholic in the old days, Tsarist Russia refused to adopt the Gregorian calendar. Russia continued to employ the Julian calendar at home until 1918, though in foreign trade and international relations she was obliged to add the Gregorian reckoning. It was common for documents, letters, histories and even private papers to be sprinkled with parentheses for the Gregorian dates. To this day the Russians observe the anniversary of the "October" revolution—for it occurred in October, 1917, by the Julian calendar then prevailing, and is still so called—on 7 November, its date in the Gregorian calendar (equivalent to 26 October by the Julian reckoning).

Church and state were completely severed by the Bolshevik revolution, and Lenin personally recommended adoption of the Gregorian calendar in order, he said, that Russia might be "in harmony with all the civilized countries of the world." As Chairman of the Council of People's Commissars (now the Council of Ministers, of which Malenkov is Chairman today), Lenin signed a decree 26 January 1918, cutting 13 days from the Julian calendar and adopting the Gregorian in its place.

As in the calendar reform of revolutionary France in 1793, the change in Russia bore overtones of hostility to the Church. (The Russian Orthodox Church keeps the Julian calendar.) On the same day Lenin also signed a decree confiscating Church lands.

As in the French revolution, too, it became the fashion in Russia for a time to speak of the year of the revolution as "Year I," the next year as "Year II," and

so on, but this practice did not last. One of the famous Soviet literary publications was named in this style, changing the number in its title each year.

Another feature borrowed from the French revolution is the term *dekada*, a ten-day period. This expression came from the French *decade*, the ten-day week of the French revolutionary calendar, and is extensively employed in economic and statistical usage. For a time, some Soviet calendars were printed in ten-day divisions, rather than the seven-day divisions of the week. The word *dekada* is firmly rooted in the language as meaning ten days or approximately one-third of the month: newspapers complain of the inefficiency of a factory which is slow to set to work on its monthly plan in the first *dekada* of the month, gets down to work only in the second *dekada*, and then rushes to complete the bulk of its month's output in overtime in the final *dekada*.

The *dekada* division of the month into ten-day periods was never officially adopted in place of the seven-day week, though the word and the concept have always been widely used in everyday speech and in economic calculations.

A five-day variation of the *dekada* idea was officially introduced to replace the seven-day week, however, beginning 1 October 1929. This was an actual calendar change. The year was made to consist of twelve months of 30 days each. Each month had six five-day weeks, called *pyatidnevki* ("five-dayers"), in which the first four days were work days and the fifth a "free day," equivalent to our "week-end." The balance of five days of the normal year (six in leap years) fell on Soviet holidays.

A major purpose was to effect con-

tinuous industrial production.* Along with the five-day week came the so-called "continuous work week," the *nepereryvka*, involving week-round operation of industry with a system of staggered free days, so that on each day of the five-day week one-fifth of the staff was having a day off.

The confusions and complications which ensued from the staggered *free day* led to disorganization of private life and, ultimately, to serious difficulties in industrial and business operations. Husbands and wives employed in different places of work found that their *free days* did not coincide. Special arrangements then had to be made to enable members of a family to have the same *free days*, and this played havoc with the work schedules in each factory and office. A boy and girl who fell in love with one another but did not have the same *free days* could not claim the special change of *free days* permitted to husband and wife; they were simply out of luck. To confound matters further, a few industries found it desirable to operate on a six-day week, as exceptions to the rule. In office work the continuous week proved often pointless, and usually inconvenient and inefficient

* Again the change bore overtones of hostility to the Church. It was hoped that the Sabbath day-of-worship would vanish into the limbo of forgotten institutions, along with Monday, Tuesday, Wednesday and so on. All the age-old religious festivals, such as Christmas and Easter, were no more. A Moscow newspaper had a cartoon titled "The Purge of the Calendar," showing a stalwart laborer beating the stuffing out of a calendar hanging from a clothesline. The figures and symbols scattering from the insides of the calendar were Sundays and various religious holidays of Christians, Jews and Moslems. A Riga cartoonist showed a Soviet soldier shooting to death two young ladies placed against a wall with bandages lettered "Saturday" and "Sunday," with the caption. "For their bourgeois origin."

because of the absence of a fifth of the staff on each work day. Office and factory meetings alike could not be held with the entire personnel present. Moreover, a worker could no longer be personally responsible for the care of the machine at which he worked, since others had to operate it on at least one day of the continuous work week. When this system was coupled with around-the-clock operation of a factory, machinery wore out faster; in addition, labor was soon found to be less productive on the night shifts.*

On 23 June 1931, Stalin addressed a conference of economic managers and criticized the five-day week, saying that "some of our comrades hurried too much in introducing the continuous week and in their haste distorted it into depersonalization."

The five-day week and the staggered *free day* system were discarded. Instead, the year was divided into twelve 30-day months, with each month consisting of five six-day weeks. Soon the 30-day

* Colored slips were issued to the population, marking each person's day off. Corresponding to the five days of the newly established week, there were five colors—yellow, pink, red, purple and green. The idea was that Soviet citizens would learn the colors of their friends and kinfolk and so know who rested on what days, should there be any desire for visiting or for joint celebrations. It was suggested that "if one's color is purple, one picks one's friends from among the purple."

Another idea was to have visiting cards printed in the color of one's *free day* slip. . . . The five universal holidays included a Lenin observance, Revolution Day and of course May Day, an international workers' holiday, first conceived in America in the 1880's and now most zealously observed in the Soviet Union. . . . It was proposed to invent new names of appropriately revolutionary sound for the days of the week, starting with Lenin-den (Lenin day), but the plan was never carried out. Meanwhile the newspapers continued to print the old weekday names on their mastheads, presumably because the old 7-day week was still used in the country districts.

months were abandoned in favor of the months of the Gregorian calendar. But the six-day week remained until 1940. The *free days* were the sixth, twelfth, eighteenth, twenty-fourth and thirtieth of each month. In a 31-day month the thirty-first was a working day in some places of employment and a *free day* in others; in February either the last week was extended to 6 March or an extra *free day*, 1 March, was introduced. The complications of staggered *free days* were thus eliminated and the entire country had the same days off from work except, of course, for employees of institutions which must function uninterruptedly, such as public utilities, hospitals and police. A few industries involving arduous labor retained the five-day week as an exception, in order that the worker might enjoy a more frequent break to relieve the strain of his labor.

Throughout all these changes the villages remained relatively little affected. Even the collectivized farms commonly retained the seven-day week and the observance of the Sunday.*

On a proposal presented in the name

* A commentary on the stubbornness of the Russian peasantry and the difficulty of revolutionizing village life, is the way the seven-day week persisted in the countryside. Even the word "Sunday" which in Russian also means "resurrection" survived not only in home use but also in official documents. Thus the Soviet election laws provided that for national voting a day should be set aside which combined the *free day* of the cities with a non-working day in the country, and the official explanation was that by "non-working day" the law meant Sunday in Christian areas and Friday in Moslem regions. . . . When in 1929 and again in 1932 the authorities tried to enforce the 5-day week and later the 6-day week in the farming districts, the peasants blandly sabotaged the reform by taking off not only the *free day* but also the good old Sunday every seven days. The resulting confusion and loss was too much for the authorities and the peasants won out.

of the Central Council of Trade Unions, the Supreme Soviet decreed a reversion to the seven-day week of the Gregorian calendar 27 June 1940. The reason given was the danger of involvement in the second world war and the need for a longer work week to meet that danger. (Hitler invaded on 22 June of the following year.) The shift from a 60-week year with a six-day week to a 52-week year with a seven-day week, one day in each week being a *free day* in both cases, added eight work days in the year. The decree was accompanied by other increases in work time—reintroduction of the eight-hour day in most occupations (in place of seven and six hours) and authorization of overtime when deemed necessary, plus prison sentences for unauthorized transfer from one job to another, etc.

The reversion to the Gregorian week brought the calendar into conformity with the practice of other countries and the urban week into conformity with the rural. The state's week was also made to coincide with the Church's: Sunday became the *free day*.

It is not inconceivable that the new regime may now be inclined toward a change to The World Calendar for a number of reasons. For one thing, the new regime has laid heavy emphasis on promises to the Soviet public of relaxing the rigors which have prevailed through the years of war and reconstruction. One of the "conditions for communism, the highest stage of socialism" which Stalin set forth in his last written work (published in October, 1952—"Economic

Problems of Socialism in the U.S.S.R.," reprinted from the *Current Digest* translation in "Current Soviet Policies," Praeger, New York, 1953)—is greater leisure for the people. It is interesting, just incidentally, that Stalin spoke of reducing the work day eventually "at least to six and then to five hours," but did not mention the work week.

The new regime has made considerable concessions to the public and promised even more in respect to working and living conditions. A shorter work week may become one of its promises; and if it does, it is not beyond possibility that calendar reform may be an accompaniment to the shift in the work week.

An even more likely factor is the great stress placed by Soviet economics today upon improved planning and statistical services. It is beyond our scope here to deal with this matter, but it is quite possible that in studying the problems of economic planning and statistics the Russians have found calendar reform advantageous.

Finally, there is the evident desire of the present regime, for its own reasons, to show cooperation and initiative in such international bodies as the I.S.O.

A combination of factors appears to have swung Russia into the growing list of supporters of calendar reform. Whether the Soviet will go beyond its present cautious endorsement of study of The World Calendar Association proposal remains to be seen. That the development of the Russian studies will lead to beneficial results is definitely assured.

RAISING A NEW STANDARD

By James Avery Joyce

Honorary Secretary of the British Section of The World Calendar Association

REGULAR readers of this *Journal* will have noted in recent issues several articles emphasizing the important work being done by the International Standardization Organization (I.S.O.) and more particularly, the friendly relations which have been developing between the I.S.O. and The World Calendar Association. This article, written from Geneva, carries that story a stage further.

The annual Council meeting of the I.S.O. has just been held in Geneva, and the subject of calendar reform was again discussed at considerable length, developing new friends and new alliances that will help mightily in clearing the road toward enactment. I was particularly happy with the cooperative attitude of India and Russia.

Perhaps a British observer will be forgiven for mentioning that the present year has been one of special significance for the British Standards Institution, the British branch of I.S.O.: it has been marked not only by a surprising amount of publicity in the general press (the British have hitherto been less standards-conscious than the Americans, French and Russians), but also by the establishment of a new headquarters in London's West End. Right in the height of mid-summer, the 325 members of the B.S.I. staff decamped from their unstandardized offices—which lay scattered along the labyrinthine corridors of an ancient multi-

purpose building in Victoria Street, under whose roof the Institution had grown from a one-man-and-an-office-boy concern at the beginning of the century to a Government-sponsored organization of industrial and technological leaders whose current income runs to a million dollars a year.

The new streamlined offices in Mayfair have been provided with a Council Room for 80 members and 14 committee rooms—the latter a tangible evidence that much of the B.S.I. work has to be done in committee. One gains some idea of the scope of the Institution's activities when one learns that last year there were 3,600 meetings of 14,000 committee members.

I might use, for the moment, the B.S.I. as a typical example of the vital work of standardization as it is proceeding in all civilized countries all the time. Since 1901, when the new-born B.S.I. first sharpened its infant teeth on steel girders (which the building industry found in a bewildering jumble of heterogeneous sizes), there has hardly been a single commodity or manufactured article in common use which the Institution has not licked into shape.

From bolts and screws to electric light bulbs and spark plugs, the Institution has dealt with an amazing range of everyday gadgets, tools and commodities. One of their most interesting achievements was to fix the pitch of middle C on the piano,

a note which is broadcast every evening by the B.B.C. so that orchestras all over the world can play in tune.

The manufacture of cloth—for example, when does “wool” become “worsted”?—has been the subject of many specialist committee sessions and important reports. In this field the name of Lord Merthyr (Chairman of the British Section of The World Calendar Association) is well-known and respected among the B.S.I. experts, for he has presided over at least one such committee with distinction.

It is not surprising, on the one hand, that the International Standardization Organization (to which 34 national member bodies are affiliated) should have taken kindly to the problem of calendar standardization, though this question has only recently come before the central body in direct form—and, as it reaches into other fields of human activity than the purely technical ones which are the province of standardization experts, it is a question which has to be examined with due regard to several factors. On the other hand, as Dr. Hilding Törnebohm (head of the Swedish Ball Bearing Co. and currently President of I.S.O.) said recently: “Inasmuch as the I.S.O. is recognized by the U.N. as the paramount authority in matters of standardization, it is natural for The World Calendar Association to seek a closer contact with our group.”

This closer contact was facilitated a year ago, when delegates from 30 countries participated in the triennial Congress of the I.S.O. in New York City. In addressing the standardization delegates on that occasion, Miss Elisabeth Achelis (President of The World Calendar Association) asked the question: “While your various national organizations are stand-

ardizing weights, measures and other matters, how can they neglect this great basic element of time measurement?”

The response of the I.S.O. was not long in coming. During its month of New York meetings, the Council unanimously adopted the following resolution: “The Secretary-General is requested to inform member bodies of The World Calendar Association’s request, so that they may express their views on the possibility of the I.S.O. studying calendar reform.”

This resolution was communicated to all member bodies in December, and it was backed up by a direct appeal from the then-President of I.S.O., M. Albert Caquot, who had done a mighty work in building up the calendar reform movement in France. M. Caquot wrote:

“The French Association for Normalization (AFNOR), realizing the very great advantages to be obtained—especially on the economic side—by the adoption of a regular and perpetual calendar, has since 1950 been engaged in a very careful study of this project of The World Calendar Association . . . A reform such as this must be accomplished at an international level. That is why the I.S.O. has been asked by The World Calendar Association to try to bring about the reform, after first asking member bodies to express their opinions regarding the possibility of the I.S.O. studying the question.

. . . I strongly recommend to all I.S.O. members that they accord their fullest attention to the examination of this proposed reform and submit their opinions to our General Secretary as requested.”

When the Council of the I.S.O. met in Geneva in late July this year, the ground had thus been prepared for a continuation of the calendar reform proposals.

Although the Council members had to cope with a heavy agenda covering a vast field, the President, Dr. Törnebohm, extended the present writer the courtesy of a hearing before the Council, so that the views of The World Calendar Association could be put directly to the members.

Already a good number of member bodies had sent in their replies; others had indicated that they required more time for consideration. In spite of the short time that had elapsed since the matter had been formally placed before the membership, it was evident that a substantial proportion had welcomed positive action on the part of the I.S.O.

Although the final decisions on the whole matter are still *sub judice*—until other replies from member bodies have arrived at headquarters—The World Calendar Association has every confidence in the future close relationship of the two organizations, in the light of the Geneva discussions.

The present writer in particular would like to put on record his personal delight at meeting face-to-face, on social no less than on formal occasions, personalities whose names are famous not only within their own nations, but internationally, as the creators of standards and new industrial techniques which have—through the unremitting labors of the I.S.O.—made life easier, pleasanter and more efficient

and economical, for millions of people.

The World Calendar Association is honored to be found in such excellent company and to be associated with such sensible and beneficial enterprises. Though it may be invidious to single out individuals, brief mention might be made of three of the distinguished participants in our July discussions. First, it would be difficult to find anywhere, even in Geneva, a more genial and world-minded “international civil servant” than the Secretary-General of I.S.O., Henri St. Leger, who has been responsible for bringing The World Calendar project before so many member bodies. Second, another I.S.O. Council member, M. Jean Birlé of France, who through his own organization (AFNOR) has given all other member bodies a splendid lead in making calendar reform an essential part of standardization research. Third, I feel that the Russian delegation made a positive contribution of considerable importance to the deliberations, a contribution which I think will have increasing influence in the future. Subsequent reports in the Soviet press give additional weight to the Russian declarations at I.S.O., leading inevitably to the conclusion that calendar reform—like health and prosperity and peace—is a goal sought, not by just a few exceptional people, but by the whole human race.

NEW VATICAN STUDY

WASHINGTON, D. C.—Calendar reform is being re-examined at the Vatican. A statement from the Apostolic Delegate in Washington, Archbishop A. G. Cicognani, says: “With reference to the present attitude of the Vatican on the subject of The World Calendar, I have been asked to inform you that the Holy See now has the question under study and will make known its conclusions in the matter at the proper moment.”

IRAN'S CALENDAR CONFUSIONS

By Harold Watkins, M.B.E., London
(Abstracted from his forthcoming book, *Time Counts*)

ALTHOUGH the Moslem countries of the Middle East are in continual difficulty with the wandering lunar calendar which they adopted after the death of Mohammed, there have been few attempts to correct or revise it. In recent times, Iran (still better known as Persia) is the only Moslem state where a revised calendar has actually been legislated. This was done only about 30 years ago by the aggressive Riza Shah Pahlavi, and I believe his rather laborious revision is still the legal calendar of Iran.

A Moslem country is perhaps the place where one would least expect to find an active movement for calendar reform, because the Moslem calendar is tied so closely to the Mohammedan faith that the two would seem to be inseparable. A highly interesting discussion of this problem, by a leading Moslem scholar, Dr. Hashim Amir Ali of Osmania University (Hyderabad, India), was published in the June issue of the *Journal of Calendar Reform*. Professor Ali expects to visit Iran the latter part of this year, in a further study of the calendar situation in that area, and I hope that after his interviews with Premier Zahedi and others, he will publish his conclusions for the benefit of all students of calendar reform.

Before the time of the Prophet, the Arab calendar had been of the early luni-solar type; that is, with alternate months of 29 and 30 days, corrected from time

to time by an intercalary month to keep the calendar in step with the seasons. The Koran, when it came, suppressed this intercalary month—"for the number of months is twelve, as was ordained by Allah"—and shortly after the death of Mohammed the Moslem caliph Omar (caliph from 634 to 644)—conqueror of Egypt, Palestine, Syria and Persia, and the first "Commander of the Faithful"—instituted the new era based on the Koran. It dated from the first new moon after the Prophet's flight from Mecca to Medina, which happened on 16 July in the year A.D. 622, a Friday. And Friday has since been the holy day of all holding the Moslem faith.

Because the calendar is strictly lunar, the Mohammedan year fails to keep step with the astronomical tropical year; it gains approximately one year in 33 on the Gregorian, so that a person who would be described as 34 years of age by Moslem calculation would be about 33 under Gregorian rules.

For astronomical and chronological purposes the months are generally fixed by rule and not by observation. They have 30 and 29 days alternately, except the 12th month which may have either 29 or 30 days. In a cycle of Mohammedan years, 19 are common years of 354 days, and eleven are leap years of 355 days. Thus 360 lunations are made equivalent to 10,631 days: as their real dura-

tion is 10,631.015 days, the error is extremely small.

Observation, however, is still required for determining the start of the month for general, and especially for religious, purposes. A new month begins with the first sighting of the crescent of the new moon after sunset. An interesting comment on the impact of this custom is found in a recent biography of King Ibn Saud of Arabia, where the author (H. St. John Philby) is discussing the fast of Ramadan:

There had been some discussion towards the end of the month as to the possibility of the new moon being seen after sunset on the 29th day, and after careful study of the *Nautical Almanack* I had predicted that it would not be visible. Nevertheless the king sent two sharp-eyed Badawin to search the sky from the roof of the Ma'abida fort opposite the palace. They returned unsuccessful, but a flutter was created by two citizens of Mecca, who claimed to have seen the crescent, and were promptly sent by the king to give their evidence before the ecclesiastical court. Its verdict was negative, and as no report of the sighting of the crescent had come in from any other quarter, it was decreed that there should be a thirtieth day of fasting.

It should be mentioned that, since the establishment of the Saudi-Arabian network of wireless stations, the range of possible sighting of the new moon has been greatly extended, with the result that such claims have become more frequent. The duty of determining their truth and reporting the result to headquarters by wireless is incumbent on the local *Qadhis*, while the final decision rests with the king in consultation with the bishops of Mecca or Riyadh. It is a remarkable fact that the northwest corner of the country has almost always been the source of such reports of doubtful sightings, particularly the villages of Ula and Tabuk, whose experts have devised a method of their own for watching the motions of the crescent during the day. They put out a dish of water to catch the reflections of the sun and moon: if the latter is behind the former at noon, they follow

both bodies till sunset, when they have a good chance of seeing the crescent if the sky is clear.

The months of the Mohammedan calendar, and the number of days (for chronological purposes) are:

1 Muharram	30	7 Rajab	30
2 Saphar	29	8 Shaaban	29
3 Rabia I	30	9 Ramadan	30
4 Rabia II	29	10 Shawwal	29
5 Jamada I	30	11 Dulkaada	30
6 Jamada II	29	12 Dulheggia	29 or 30

This makes a total of 354 days, or 355 in leap years. The Mohammedan years are known as Hejira years and dates are prefixed with the letters A.H. (Anno Hejira). The leap year of 355 days is known as *kabishah*. The year A.H. 1372 began on 21 September 1952 by the Gregorian calendar. Whether a year is ordinary or *kabishah* can be worked out by dividing its number by 30; if the remainder is 2, 5, 7, 10, 13, 16, 18, 21, 24, 26 or 29, then it is a leap year with 355 days. Because of the difference of 11 days in the length of the Moslem and the Gregorian years, it is possible for the Hejira New Year—which is celebrated on the first of Muharram—to arrive twice in a Gregorian year, as last happened in 1943, and occurs about every 33 years.

Looked at from a Western point of view, the great disadvantage of the Moslem calendar is its retrogression through the seasons. A given date will, in the course of 33 of our years, or 34 Hejira years, fall in all the four seasons. For agricultural purposes, the Moslem month and day differ with each successive year by 11 days—sowing and reaping are never in the same place in the calendar twice running.

Persia's story, however, is not quite the same in this respect as that of other Mos-

lem countries. After the conquest, an important calendar reform was introduced. In the 11th century, under the Sultan Malik Shah Jalal-al-Din, a great deal of interest was taken in astronomy, and around the Suljiks of northern Persia were gathered a number of astronomers who had at their disposal a new observatory, founded by Malik Shah at Nishapur. Among them was the poet-astronomer Omar Khayyam.

The old pre-conquest Persian calendar had been, as Professor Sarton puts it, "temporarily replaced" by the Moslem calendar. Malik Shah therefore called together a committee of astronomers, under the leadership of Omar Khayyam, to revise the old system. The result was the Jelali solar calendar, "the best* at that

*Omar's calendar gets even higher praise from scholarly authorities in India, where it had a profound, but belated influence. Professor M. N. Saha, head of the Astronomical Society of India, wrote last year: "In Iran, the great Sultan Malik Shah of the Seljuk dynasty, introduced the Jelali solar calendar in 1079, and this achievement was brought to India in 1584 by Emperor Akber. After a few decades it fell into disuse, but it gave rise to a number of hybrids like the Bengali *San* and the Fasli eras, which are still current in parts of India. The Jelali calendar was one of the best solar calendars, as it took into account the precession of the equinoxes and gave a better approximation of the actual tropical year than even the Gregorian rules. Akber's reform measure was misunderstood, and in the absence of central guidance became combined with ancient errors. Further, it took on local color in various places and the very purpose of introducing a national calendar was defeated. But it was a worthy attempt, the greatness of which should be properly appreciated." . . . Omar Khayyam (d. 1123) was known during his lifetime rather as a scientist than as a poet. His standard work on algebra, written in Arabic, and other treatises of similar nature, raised him at once to foremost rank among the mathematicians of all time. As a specialist in the science of calendar reform he belongs at the top of the list, with no rival except perhaps the Greek-Egyptian Sosigenes.

date recorded by mankind," and described by Gibbon as "a computation of time which surpasses the Julian and approaches the accuracy of the Gregorian style."

This remarkable calendar began a new era, which was counted from the 10th of Ramadan in 471 A.H., or 16 March 1079 A.D., but it was not destined to last long, and later the Mohammedan lunar calendar was again imposed on the country. Unfortunately, details of the Jelali system are not fully clear, for the book which Omar left on the subject has not survived, and the accounts of its content by later writers are highly divergent.

In the book *Introduction to the History of Science—Homer to Omar Khayyam*, Professor George Sarton of Harvard remarks: "There are many interpretations of Omar's reform and to each corresponds a certain degree of accuracy, but at any rate Omar's calendar was very accurate." The correct interpretation is probably one of the following, the second being the most likely. I quote for each the authority, the gist of the change, and then the resulting error:

According to al-Shirazi (d.1311): 17 intercalary days in 70 years; error, one day in 1,550 years.

According to Ulugh Beg (d.1449): 15 intercalary days in 62 years; error, one day in 3,770 years.

Modern interpretation: 8 intercalary days in 32 years; error, one day in about 5,000 years.

Although scholars are not agreed on the internal division of the year in the Jelali calendar, it undoubtedly reflected the high degree of Eastern scientific and astronomical knowledge of the period—which was about the time William the Conqueror invaded England.

All this background becomes more interesting because it is in Persia (or Iran) that a new calendar reform has been not only proposed, but actually instituted, in this present century.

When Riza Shah Pahlavi* came to power in Persia in the early 1920s he sought to introduce many Western ideas, and one of these was an effort to adjust the 354-day Moslem calendar to the 365-day Gregorian. In a recent book, *The Persian Language*, (published 1951), Professor Levy of Cambridge explains that, in corresponding with Europeans or Europeanized fellow-countrymen, Persians are apt to date their letters according to the European calendar, using the French forms—Janvier, Fevrier, etc.—for the months. Normally, however, private letters are dated according to the Hejira era of the Mohammedan calendar. Shah Riza sought to synthesize the two systems, while retaining well-established features of the traditional calendar of the country.

Abandoning the strictly lunar reckoning of alternative 29 and 30 day months, he brought into use a solar calendar still of 12 months but with their lengths re-adjusted to make a total of 365 days in the year—and with early Persian names which had never fallen entirely out of use.

The first six months have 31 days each, the 7th to 11th months have 30 days each, and the 12th month has 29 days except in leap year when it has 30. The year be-

gins conveniently at the vernal equinox. The new months are:

Farvardin-mah begins	21 or 22	March
Ardibahisht-mah	21 or 22	April
Khordad-mah	22 or 23	May
Tir-mah	22 or 23	June
Mordan-mah	23 or 24	July
Shartvar-mah	23 or 24	August
Mehr-mah	23 or 24	September
Aban-mah	23 or 24	October
Azar-mah	22 or 23	November
Dai-mah	22 or 23	December
Bahman-mah	21 or 22	January
Esfand-mah	20 or 21	February

The new era was entitled the *Sale Hejra Shamsi* (Calendar Hejira Year), and the new date was arrived at by taking the Christian year and subtracting from it the number 622 (year of the Hejira) for dates between 1 January and 20/21 March, and 621 for dates between 21 March and 31 December. Thus *Now Ruz* (the Persian New Year) of the year 1302 corresponded with 22 March 1923, and *Now Ruz* 1325 corresponded with 21 March 1946. Celebrations of the Persian New Year last for 13 days.

Admirable as this reform would appear to be in its objective of harmonizing the two most widely used calendars in the world—at least a step forward towards a world calendar—it seems to have had no appeal to other Moslem countries, and I have found no evidence of its use anywhere outside the boundaries of Iran. It is employed on official documents in that country, and newspapers originating there use it, some bearing also the conventional Mohammedan date and the Gregorian date. But in private correspondence between Persians and the inhabitants of other Moslem countries it is pretty certain that the conventional Mohammedan lunar dating is almost invariably employed.

* Riza Shah Pahlavi was an army officer of humble origin who took over the tottering government of Persia in 1921, becoming Prime Minister and then Shah in 1925. He ruled as dictator for 16 years, but in World War II became too friendly with the Axis and was forced to abdicate in favor of his 21-year-old son, the present ruler.

PROGRESS AT GENEVA MEETINGS

By Paul-Louis Hervier

Chairman of The World Calendar Association of France

AT Geneva the United Nations European headquarters has never been so busy as it was this summer beginning in July, when ECOSOC (the Economic and Social Council of the UN), with its many committees and sub-committees, held its summer sessions. Notable also were the meetings of the UN's Conference of Non-Governmental Organizations (NGOs for short), and the annual Council of the International Standardization Organization (ISO). The World Calendar Association was represented at all these meetings by its liaison officer, James Avery Joyce.

The weekly magazine *Peace News*, published by the Society of Friends (Quakers), made the following significant comment on the Geneva program: "A new form of world-wide democracy is growing up under the banner of the United Nations, without fuss or undue publicity. For, while ECOSOC has been speaking for the governments and getting through a loaded agenda covering countless subjects, another conference has been meeting alongside it, representing the people at large. The Conference of Non-Governmental Organizations may have an unattractive title, but its agenda is hardly less important than that of the ECOSOC umbrella under which it meets."

About 150 international bodies compose this Conference, which is growing in size and influence from year to year. Several of the NGOs have world-wide memberships, running into many millions—such as the International Chamber of Commerce, the World YMCA and YWCA, the World Jewish Congress, the International Cooperative Alliance, the International Council of Women. Some of these giants have 50 or more national sections or subsidiaries. Smaller in membership but highly influential in their fields of effort are such groups as the World Medical Association, the International Institute of Administrative Sciences and The World Calendar Association.

All these NGOs have been brought into "consultative status" with ECOSOC and its various committees. They are *consulted* on many topics. In fact, they are slowly becoming a sort of World Parliament, whose delegates actually take their seats on the floor of the Council Hall, and under certain circumstances may address the main council of ECOSOC and discuss their particular problems in the various committees behind the scenes.

A silent revolution is in process. The people of the world are learning to speak to each other over the heads of their national governments. At the present writing, for example, while ECOSOC is trying to agree on principles of equal rights between men and women, a dozen women's organizations covering millions of members are lobbying for their program to be embodied in the UN resolutions and sent back to governments. Similar procedure is being discussed in relation to calendar reform.

INDIA'S FIRST CITIZEN

By Harry F. Kern in Newsweek

ON a plain brown door in the main corridor of India's big circular Parliament building, the name plate simply says: "Jawaharlal Nehru." The door opens into a pleasant airy room whose occupant is not only Prime Minister of the second most populous country on earth, but also Foreign Minister, Defense Minister, and active head of the dominant Congress Party.

Nehru has achieved an international stature not approached by any other Indian. An English tutor, Harrow, Cambridge, and reading law at the Inner Temple gave him a thorough grounding in everything the West stood for. Thirteen years in British prisons in India came as a sort of postgraduate course.

Many Indians think Nehru should devote himself to world affairs instead of straining through the daily mass of detail that makes him keep a 19 to 20-hour day. The Prime Minister rises at 6 or 7—the earlier hour if Parliament is in session—in his official New Delhi residence. This is a big-two-story white-walled dwelling once occupied by the British Commander in Chief of the Indian Army. The first thing Nehru does on rising is to stand on his head—a Yoga exercise called *Shirshasana*. According to the Prime Minister, it "is considered good according to Hindu tradition and besides it gives one the proper perspective on the world of today."

Nehru next reads the papers, breakfasts, and receives visitors. He then leaves for his office. He works until 6 or 7 p.m., with a short time off for a simple lunch. He returns home for a light dinner. Nehru prefers Western food, although he occasionally likes Indian dishes. He smokes English cigarettes in a long holder.

Since the death of his wife, Nehru's most constant companions have been his daughter, Indira (he finds time each day to play with her two boys), and his two sisters, Mrs. Pandit, Indian delegate to the U.N., and Mrs. Krishna Hatthee Singh, wife of a Bombay mill owner.

A magazine article once analyzed Nehru thus: "His overwhelming desire to get things done, to sweep away what he dislikes, and build anew, will hardly brook long the slow process of democracy. His conceit is already formidable. It must be checked. We want no Caesars."

These remarks were written by the Prime Minister himself. He is too fastidious ever to become a Caesar, but he has the tough-mindedness and occasional ruthlessness that make a supreme politician. He dominates the Congress Party. There are few interruptions when he rises to speak—sometimes extemporaneously for as long as two hours. In his continued existence lies India's greatest strength. But he is 63. There is no successor in sight; and the prospect of what will follow constitutes India's greatest weakness.

"The British," one top Indian official observed, "scrambled us all together and made us Indians. Now I fear the tide has turned in the opposite direction." He was referring to the creation of the linguistic state of Andhra in southern India and to plans to follow this racial pattern in other reorganized internal political divisions. The pessimistic see India reverting eventually to the loose and fractious confederation that prevailed before the British came. The optimistic feel that national life can be reorganized on a more stable basis if the racial and religious problem is faced now.

[The current campaign for unification of the nation's 30 different calendar systems is an example of the determined way in which this reorganization is being carried out.]

NEHRU SPEAKS UP FOR INDIA

Proceedings of Calendar Reform Committee Meeting in Delhi

At the direction of Prime Minister Nehru and his Minister of Education (Maulana Abul Kalam Azad), the India Council of Scientific and Industrial Research appointed a Calendar Reform Committee of seven scientists, who held their first meeting at Delhi on Saturday, 21 February, with continuing sessions on the next two days. The Committee was under the chairmanship of Professor M. N. Saha of Calcutta. The other members were: Dr. K. L. Daftari of Nagpur; Dr. Gorakh Prasad of Allahabad; Shri J. S. Karandikar of Poona; Shri N. C. Lahiri of Calcutta; Professor R. V. Vaidya of Ujjain, and Professor A. C. Banerjee of Allahabad. The Committee met under the following terms of reference: "It is entrusted with the task of examining all the existing calendars which are being followed in India, and after a scientific study of the subject of submitting proposals for an accurate and uniform calendar for the whole of India." Brief biographical descriptions of the Committee members are found as footnotes on the following page.

PRIME MINISTER NEHRU'S official "message," which opened the first meeting of the Calendar Reform Committee of India (held in Delhi on 21 February 1953, in the offices of the Council of Scientific and Industrial Research), was as follows:

I am glad that the Calendar Reform Committee has started its labors. The Government of India has entrusted to it the work of examining the different calendars followed in this country and of submitting proposals to the Government for an accurate and uniform calendar based on a scientific study for the whole of India. We have at present 30 different calendars, differing from each other in various ways, including the methods of time reckoning. These calendars are the natural result of our past political and cultural history and partly represent past political divisions in the country. Now that we have attained independence, it is obviously desirable that there should be a certain uniformity in the calendar for our civic, social and other purposes and that this should be based on a scientific approach to the problem.

It is true that for governmental and many other public purposes we follow the Gregorian calendar, which is used in the greater part of the world. The mere fact that it is largely used, makes it important. It has many virtues, but it also has certain defects



Nehru (photographed at the Coronation)

which make it unsatisfactory for universal use.

It is always difficult to change a calendar to which people are accustomed, because it affects social practices. But the attempt has to be made even though it may not be as complete as desired. In any event, the pres-

ent confusion in our own calendars in India ought to be removed. I hope that our scientists will give us a lead in this matter.

As his personal representative, Nehru sent to the meeting Deputy Minister Dr. K. D. Malaviya (in charge of Natural Resources and Scientific Research), who welcomed the Committee to the capital in an impressive address. He said in part:

You are meeting here this morning, not merely for an academic discussion on a subject of scientific interest, but rather to give a practical lead to the country in a very important task—the bringing about of uniformity in the Indian calendars. You know how fundamentally important is the concept of the calendar for our civilized life, for without a calendar no country can get on with its day-to-day work.

The concept of month and year starts from accepting days as the unit. The Indian astronomers of the Siddhantic period, 400 A.D. to 1200 A.D., were the first to invent the idea of *Ahargana* or the "heap of days" for time reckonings. This device was introduced into European astronomy as the "Julian system" in 1582 A.D. by Joseph Scaliger, a distinguished French astronomer.

Professor Meghnad Saha, D. Sc., F.R.S., is head of the Institute of Nuclear Physics in Calcutta and President of the Astronomical and Astrophysical Society of India. He was elected a member of the First National Parliament of India as an Independent from Northwest Calcutta. His international reputation as a scientist dates from his Theory of Thermal Ionization, published in 1920, which marked a new era in astrophysics. Since that time he has made fundamental contributions in spectroscopy, nuclear physics and the propagation of radio waves in the ionosphere.

Professor A. C. Banerjee is Vice-Chancellor of the Allahabad University. As a scientist he has specialized in hydrodynamics, astronomy and other branches of applied physics.

Dr. Gorakh Prasad is also a member of the faculty of Allahabad University. His outstanding work has been in modern astronomy. He has written two books on this subject in Hindi.

Dr. K. L. Daftari is a Doctor of Literature from Nagpur University. Now 73 years old, he has written extensively on scientific subjects in the Marathi language and in Sanskrit.

At the same time it is said by the modern astronomers that a critical review of the *Vedanga Jyotish* calendar shows that purely Indian systems of time reckoning up to the early centuries of the Christian era were very crude compared to the Greco-Chaldean time reckonings of the Near East.

It is rather strange to find that while most of Christendom in spite of diversity of race and country follows the Gregorian calendar, and while all the Islamic countries follow their lunar calendar, the different States and Provinces of India have followed and are following not less than 30 different calendars differing in the era beginning, the initial date of the year, and to some extent in the methods of calculation. Though these calendars are used mainly for social purposes, and for fixing the dates of religious observances, their very diversity causes a great deal of inconvenience to public and State.

The same holiday may be observed in different parts of the country and even in the same locality on different days, according to the method of calculation. In some cases, as for example the Car Festival of Puri, the observances under the Bengal and Orissa calendars have sometimes differed by as much as a month. Why is it so? I understand that calendars were put on a scientific basis about 1,500 years ago; the rules laid down by our astronomers were based on

J. S. Karandikar at 78 is a former Vice-Chancellor of Tilak Vidyapith, the national university of Maharashtra. Since the inauguration of Tilak Panchang, a reformed calendar introduced by the late national leader, Bal Gangadhar Tilak, he has been serving on the committee for publication of annual almanacs in Maharashtra and has written extensively in advocacy of calendar reforms.

R. V. Vaidya is a 53-year-old member of the faculty of Madhava College at Ujjain. As director of the Astronomical Observatory at Ujjain for the past 11 years, he has brought out an annual *Astronomical Ephemeris*, and has advocated the urgency of solving India's calendar controversy.

N. C. Lahiri, of Bengal, is attached to the Government's Department of Commercial Intelligence and Statistics. As far back as 1932 he was associated with a pioneer organization for introducing correct astronomical calculations in current almanacs, and he now conducts the calculations of three popular almanacs in Bengali. He is the author of several books on astronomical calculation.

such scientific knowledge as was then available, and they always took the precaution of laying down the rule for the coming generations so that these could always correct their calculations by means of exact observations of the sun, moon and other heavenly bodies, which serve as time keepers.

Up to 1200 A.D., before India passed under foreign invaders, our astronomers at Ujjain and other centers, always took the trouble to correct their calculations according to direct observations of the heavenly bodies. But, after 1200 A.D., the indigenous centers of astronomical study were all broken up, and the new rulers did not bother to set up fresh centers till towards the end of the Moghul rule, when Maharaja Jai Singh of Amber established five observatories at Ujjain, Jaipur and other centers for astronomical studies after the pattern of the famous observatory of Ulugh Begh at Samarkand. Our calendar makers, being left to their own resources, and having no astronomical observatories, had to fall back for calculations on rules which were insufficient and incorrect and which vitiated all the results. Therefore, confusion crept into the calendars, and they have become diversified according to local usage and customs. This condition is representative of the 800 years of suppression, and is symbolic of the history of India.

Now that we are an independent nation and are making all efforts to bring about integration in our national life, it is obvious that an important item like the calendar cannot be left in its present confused state. We use, for civil and administrative purposes, the Gregorian calendar which was imposed by British Rulers. This calendar is not *their* invention, but like the Roman script it was imposed on them by their Roman civilizers, who got it partly from Egypt. On account of the dominance of the Christian powers during the last two centuries, theirs has become the predominant calendar. But on principle it is a very inconvenient and unscientific calendar, and needs reform.

There is a proposal before the United Nations for the revision of the Gregorian calendar. One of the tasks of the present Committee will be to make suggestions to this world-body for the evolution of a world calendar which will be scientific and can command the consent of all nations. Our

Mohammedan fellow citizens will continue to use the Hejira calendar for fixing their religious holidays and we leave them there. The labor of the present Committee is to make a scientific study of all the calendars of indigenous origin, and make suggestions for a unified calendar for the guidance of administration, for social purposes, and as far as practicable, for fixing the religious holidays for India. I am assured by my astronomical friends that this is possible.

We shall be looking forward to your evolving a formula which will be acceptable to the different people and States of India, and the Government of India will give serious consideration to the adoption of your proposals. I need hardly add that these should be based on science, should take due consideration of the customs and religious festivals in different parts of the country, and at the same time should provide a calendar which the different communities and States can adopt.

While making these suggestions before you, I am aware of the difficulties. Calendar reform can be suggested by scientists, but it can be carried into practice only by those who have authority. The ancient Roman calendar could be reformed only by a dictator like Julius Caesar, and later on by the religious dictator of Christendom, Pope Gregory XIII. The ancient luni-solar calendar of Arabia could be replaced by a purely lunar calendar only by the authority of the Prophet. But we are now under a democracy. Whatever proposals you may make will have to be submitted to the people for their opinion—but I am quite sure that our public will not resent any innovation simply because it is a new thing, just as they do not reject electricity or new machines. I am confident the public response will be encouraging and I am certain the Government will give serious consideration to your proposals.

The Committee, in starting its deliberations, noted that "in India, at present, there is a terrible calendar confusion." For official purposes, the country has been using the Gregorian calendar since the imposition of British rule in 1757. This calendar is still being used even after the attainment of Independence—for it has

reached the status of a universal international calendar.

During the period of Moslem supremacy (1200-1757), India used the lunar Hejira calendar both for administrative and for Moslem religious purposes, except for a short period (1556-1630), when the Emperor Akber prohibited its use, and introduced a form of the Iranian solar calendar (the Jelali system) under the name *Tarikh Ilahi*. The Hejira calendar is now employed only by the followers of Islam, for fixing the days of their religious festivals.

Before the Moslem domination, the different Provinces of India had a bewildering variety of calendars for civil as well as religious purposes. They were all luni-solar, that is, the religious holidays were determined by a lunar calendar pegged onto a solar calendar. These calendars had different year-beginnings, different era-beginnings, and some used no era at all. The calendar used by the Indian astronomers employed the *Saka* era, and followed rules given by a number of *Siddhantas* (calendar systems) dating from about 500 A.D.

Though these calendars are now mostly used only for fixing the dates of Hindu religious festivals, they cause a great deal of confusion. The formulas employed by the astrologers for calculation of the position of the moon are based on observations dating back to 500 A.D. (and mostly incorrect); so later workers have sometimes made their own corrections, or sometimes have employed the nautical almanacs issued by England and the United States.

Under such a haphazard system, it often happens that in the same city there may be four different almanacs in use, giving

different dates and "moments" for the same religious observance. Moreover, they all share in one outstanding error, which concerns the progression of the solar year-beginning: thus, instead of starting on the day after the vernal equinox (21 March), the almanac year now starts on 13 April. This is due to using the wrong length of the year (365.25876 days), without allowing for the precession of the equinoxes.

The Chairman's opening address was a full exposition of the problems before the Committee. Professor Saha said:

First of all, I can assure you that Prime Minister Nehru has his heart and soul in this matter. He wants our Committee to get on with its work, and he expects us to evolve scientific proposals for the preparation of a uniform calendar for the whole of India, an achievement which will benefit the entire country.

The Deputy Minister has laid down the lines on which we shall proceed. With the encouragement of the Government, we hope to accomplish the desired objective. I need not say that without State support our deliberations would be a dead letter.

The present situation is that in India there are currently 30 or more different calendars. In Banaras alone they have four calendars, and it is quite common to find important Hindu festivals like *Ganesh Chaturthi* and *Saraswathi Pooja* being celebrated on different days in different parts of the country—or even in the same city, as happened this year at Calcutta.

Our Committee should aim at placing before the Government proposals for a uniform scientific calendar which will be acceptable to all. The task is not an easy one.

The idea of a uniform calendar is not new. For background purposes, let us take a brief glance over the past. Our Indian luni-solar calendar up to 400 A.D. was very crude, but after that date, great astronomers in Pataliputra, Bhilmal (Rajasthan) and in Ujjain particularly, made important contributions to mathematical knowledge, to astronomy and to other branches of science. They laid down the formulas for

future generations and advised calendar makers to get their calculations verified by means of observations of the sun, the moon and the planets, which are our time-makers.

At the present moment, the *Ahargana* or "heap of days" is in usage for accurate chronological calculations. The idea was first evolved by Hindu astronomers about 400 A.D., and was adopted in Europe only in the 16th century by Joseph Scaliger. The Siddhantic astronomers started the year from the day after the vernal equinox, but the older tradition was, as many Indian savants have pointed out, to begin the calendar from the winter solstice.

The Siddhantic solar months, which were invented in the fifth century, proved very inconvenient. The month-lengths varied from 29 to 32 days. But the greatest difficulty of our calendar makers has been caused by the use of the sidereal year rather than the year of seasons. The Hindu savants of olden times either were unaware of the precession of equinoxes, or thought it was not unidirectional. The mistake was pointed out by Munjal and Sripati in the 9th and 10th centuries, when the vernal equinox had receded by four to five days, and they tried to persuade the astronomers to take up the *Sayan* reckoning, but their attempt was unsuccessful. The situation now is that the vernal equinox falls on 21 March but our Siddhantic year-beginning, which ought to fall on the following day, falls actually on 13 or 14 April. Thus a mistake of 23 days is found in our calculation of seasons.

It is for the Committee to discuss whether the year is to be brought back by 23 days or whether it is better to leave the mistake as it is and to retain a permanent constant error. We know that such a mistake occurred in Europe and corrections had to be introduced. (The Julian year 1582 was found to have an error of 10 days. Pope Gregory XIII advised that 5 October should be called 15 October. This was adopted immediately by the Catholic countries, but the Protestant nations were laggard. It was 170 years before England accepted the correction. Russia adopted the Gregorian calendar only after the Bolshevik revolution.)

In India, the idea of Indian calendar reform originated from Maharashtra. Lokamanya Shri Bala Gangadara Tilak, well known as an eminent political figure of the last generation, was also a great scholar and

he initiated calendar reform in Maharashtra, starting a new reformed calendar in 1904 which is still being followed in the annual almanacs published at Poona.

The great pioneer of modern calendar-studies was Sankara Balkrishna Dixit, whose history of Bharatiya Jyotisha-sastra is a standard authoritative work, but his book is in the Marathi language and inaccessible to most people in India. I hope it will be translated into English for the use of all.

In Bengal, Madhab Chandra Chattopadhyaya has been publishing the *Vishuddha Siddhanta Panjika* since 1890, in which all calculations are made according to modern accepted formulas. Shri Nirmal Chandra Lahiri, a member of this Committee, has been continuing the work.

The problem of Indian Calendar Reform was also seriously examined at Banaras, the ancient seat of Indian culture and religion, by the late Pandit Madan Mohan Malaviya, Shri Sampurnananda, and others, and the need for rectification of the present position was impressively stated.

Thus the idea of calendar reform has been going on for a long time in this country on an unofficial level. But as it affects all classes of people, effective reform can be carried out only on the State-level. At long last everybody agrees that there should be a uniform national calendar for the whole of India.

All our religious festivals are determined according to the lunar calendar which is pegged onto the present unsatisfactory solar calendar. Hence the task before the Committee is to devise a satisfactory solar calendar first and peg onto it a lunar calendar.

I may say that there is a good deal of dissatisfaction with the Gregorian calendar, even though it has attained the status of being internationally used on an almost universal basis. There are several proposals for reforming the Gregorian system. The World Calendar Association now has a project before the United Nations for a uniform calendar for the whole world. Sir Harold Spencer Jones, the Astronomer Royal of the United Kingdom, and other eminent astronomers have expressed their support of the plan, suggesting international adoption of the change from 1956. This World Calendar, if accepted, would produce great convenience and simplicity.

Our Committee will discuss all these mat-

ters, and its function is to submit proposals to the Government of India and devise ways and means of achieving the desired scientific result. The proposals to be taken up include the following:

1. Whether a number of astronomical computers should be appointed to compile an all-India calendar for five years in advance on the lines which will be suggested by the Committee.

2. Whether steps should be taken to produce an Indian Ephemeris for the use of the almanac makers, the Navy and the Air Force.

3. Establishment of a Central Astronomical Observatory by the Government, equipped with modern instruments and apparatus, including the ammonia clock and the quartz clock for the betterment of time-service and for geophysical studies. (Geophysical studies with the aid of accurate clocks are of very great fundamental importance. In the past, scientists have studied only the earth's surface. But now the study of the interior of our planet has attained great significance. With the aid of accurate clocks, it has been found that the period of the earth's rotation undergoes sudden variations which may be due to something going on inside the earth.)

The Chairman informed the Committee that he had received a number of good wishes for the deliberations of the Com-

mittee, not only from India but also from England and other European countries, as well as from Brazil, Canada and the United States. The President of The World Calendar Association, Miss Elisabeth Achelis, sent a good-will message.

After discussion on the several points mentioned by the Chairman, the Committee arrived at certain decisions and adopted a formal set of resolutions covering the scientific aspects of their findings and the general policies involved:

1. The tropical year of 365.2422 days should be adopted for the purpose of calendar making.

2. A scientific civil solar calendar, to be henceforth called the "National Calendar," for purposes of almanac dating should have its first day after the vernal equinox day, i.e., on 22 March. (But for religious purposes, at least temporarily, the calculation may start ahead of the vernal equinox point—as a concession to prevailing customs.)

3. The Saka era should be adopted for internal purposes throughout India.

4. All calculations should be made for a central station in India, to be situated at $82\frac{1}{2}^{\circ}$ East Longitude and $23^{\circ} 11'$ North Latitude (latitude of Ujjain).

5. The day should be reckoned from midnight to midnight of the central station for

STATEMENT BY THE MINISTRY OF EDUCATION

A Communication from M. Ajmal Khan, Deputy Private Secretary to the Minister for Education, Maulana Abul Kalam Azad

THE Maulana has been in favor of the calendar reform movement from its inception. The universal calendar as proposed by The World Calendar Association is very useful indeed, and no religious question arises in this respect against its adoption.

The lunar calendar was proposed for all the religious functions of Islam because its knowledge is possible for everyone naturally. The Maulana thinks that the Muslims will carry it on for their religious purposes, but for all other purposes and especially for government administration, the new reformed calendar should be adopted.

civil purposes, but for religious purposes the local sunrise system may be followed.

The Committee made the following recommendations to the Government:

1. A tentative "National Calendar" for the whole of India should be prepared for five years in advance, showing dates, days, months, tithis (lunar days) and nakshatras (lunar asterisms).

2. Steps should be taken by the Government of India to compile an annual Indian Ephemeris and Nautical Almanac, showing in advance the daily positions of the Sun, Moon, planets and other important heavenly bodies.

3. There should be a National Observatory at a suitable place, provided with modern equipment, apparatus and time-service.

The Chairman announced that the Council of Scientific and Industrial Research had made an initial budget grant for implementation of the Committee's first recommendation, and that a staff of calculators had been appointed. In this connection acknowledgment was made to Sir Harold Spencer Jones, the Astronomer Royal, for furnishing some advance data to facilitate these calculations.

Another important task undertaken by the Committee is the drafting of a presentation to the United Nations on the subject of international adoption of The World Calendar. The desired material has been completed and delivered.

NEWS BULLETINS

SAN JOSE, Costa Rica.—The Ministry of Foreign Affairs here is showing renewed interest in The World Calendar. A few months ago the Foreign Minister, Fernando Lara, referred the subject to the Geographic Institute, and found that the head of the Institute (Dr. Federico Gutierrez) had been for many years an enthusiastic advocate of calendar reform. On the latter's recommendation, the Minister has asked the Public Education authorities to make a formal presentation of the subject before the National University.

LIMA, Peru.—This country will support The World Calendar for approval by the Tenth Inter-American Conference at Caracas next year. Announcement to this effect has been made by the Ministry of Foreign Affairs.

NEW YORK.—John J. O'Neill, an influential advocate of calendar reform and a member of the Advisory Committee of The World Calendar Association, died on 30 August at the age of 64. He had been Science Editor of the *New York Herald-Tribune* for nearly 20 years, and was a member of many important scientific organizations.

OSAKA, Japan.—Calendar publishers from all parts of Japan attended a meeting at Ohmi Shrine, near Kyoto, on 28 June, and organized a Calendar Study Association, which will actively make plans for coordinating the adoption of The World Calendar with the necessary preliminary steps in the publication of the almanacs which are widely used in Japan. Officers of the new organization are largely drawn from the membership of the Calendar Association of Japan, which is an affiliate of The World Calendar Association, International.

STOCKHOLM.—Considerable publicity has been given recently in the Swedish press to the merits of calendar revision and the need of doing something constructive about the defects of the present system. At Gothenburg, Dr. Hilding Törnebohm recently gave an important lecture on the subject, under the auspices of the Rotary Club. Dr. Törnebohm is head of the Swedish Ball Bearing Company (SKF), and is President of the International Standardization Organization. Under his leadership, much interest is being shown by industrialists and government leaders.

MOSLEM VIEWPOINT CLARIFIED

By Mohammed Ajmal Khan

Deputy Private Secretary to the Minister for Education of India

'Originally published under the title "Peace and Prosperity Through Calendar Reform," in the Hindustan Times, New Delhi, 14 June 1953)

In the previous issue of the Journal a Moslem scholar (Dr. Ali of Osmania University) discussed the problem of introducing The World Calendar in countries where the lunar reckoning is still dominant. He showed that the Moslem adoption of a lunar system was due to an incorrect interpretation of Mohammed's instructions, and that the Prophet really wanted a solar year. In his opinion, it is never too late to change, or to correct a mistake. His position is now reinforced in this highly informative article from one of the leading Moslem officials of the government of India.*

OUR month of Ramzan (Fasting) has just come to an end and those who fasted spent most of their afternoons complaining of heat, thirst and the length of summer days. Few Muslims, however, know that the first man to bring peace and prosperity through calendar reform was the Arabian Prophet of blessed memory.

Mohammed was himself the Ameer of the Hadj in the last year of his life, i.e., A.H. 10 or A.D. 632. As usual the people assembled after the Hadj and wanted to know after which month an intercalary month would be added to the year in A.D. 11. The Prophet announced that there

would henceforth be twelve months to a year according to the Law of God, after which no intercalary months would be needed.

It may be noted here that the Arabs called the year a Haul, an Aam or a Samah. All these mean a complete seasonal revolution according to the sun. It is quite clear that the Law of God (Kitab-ul-Lah) is nothing but a complete revolution of the sun. The two six-monthly journeys of Winter (Shitaa) and Summer (Saif) which were undertaken by the Qureish were possible only if the Hadj seasons occurred at the time of equinoxes (Cf. Sooratul Qureish).

It is obvious that the Prophet wanted the Muslims to follow the custom of the Christians in the matter of the calendar, so that the Ramzan should fall in the month of December and the Greater Hadj in the month of March, near about the Easter, Passover, Holi and Navroz.

Unfortunately the Prophet passed away after only three months of the Hadj, when he gave the above ordinance. The system of intercalation was given up but the

*From the Institute of Islamic Studies at McGill University (Toronto), Professor Nizazi Berkes writes: "Dr. Ali has put his finger on an important question which is not only a religious matter but also one with secular implications. He has successfully shown that the use of the lunar system in Islamic countries was originally due to an error and misinterpretation, that it was not an absolute religious necessity, and that it can be changed without any damage to the faith. I wholeheartedly agree with his approach and conclusions." . . . Editor Abdul Majid of the *Islamic Review* (London) says: "There is a great deal of truth in Dr. Ali's position. His ideas ought to be widely broadcast."

solar year of twelve months was not adopted. The Muslims still follow the lunar year for Ramzan and Hadj, with the result that numberless people either cannot attend the Hadj pilgrimage or they suffer and sometimes die owing to the inclement weather of Hedjaz. Similarly most people either cannot fast or they suffer in health when the Ramzan falls in summer months.

Moreover, the Islamic message of peace and goodwill could have been better understood by the Christians and other God-fearing nations, if the seasonal festivals and the Ramzan were celebrated by all together. If that had been done, *there would have been no crusades, no bloodshed in the name of religion and no ill-will in the name of Islam.*

It is high time that the Muslim Ulema (doctors of the Law), scientists and politicians gave their best attention to Calendar Reform in the interests of Muslims and peace.

It may be noted that the Egyptian Government has recently issued a statement that Muslims consume more food in Ramzan, the month of *fasting*, than they do in ordinary months. This is also true in other Muslim countries. But the chief idea behind fasting is to *save* as much food as possible and to *distribute* it among those who need it. The fasting was ordered to Muslims when most of them were starving as refugees in the second year of Hidjrah before the battle of Badr. They had scarcity not only of food but arms and means of transport. That is why it was ordained that those who could not or would not fast, must give one day's food instead to a needy brother in arms. It was military discipline. It did not weaken those who fasted and kept all the

soldiers of Islam in a fit condition to face the enemies of Truth in war and peace.

It may also be noted that Zoroaster, who was also a Prophet of God, definitely directed the believers to abstain from fasting, so that the fighters in the cause of Ahura Mazda against the Ahriman may not become weak. The Middle Way, according to the Buddha, is also the same. One should neither indulge in luxury nor should abstain from the good things and become an ascetic. This could only be attained, according to the Prophet, if people fasted in the shortest month of the year, as do the Christians.

In further clarification of the present situation, it will be noted that the most primitive form of superstition which exists up till now in the most advanced countries as traditional religion, is the worship of heavenly bodies—the sun and the stars. The scientific attitude of the Prophet is evident from the fact that he defined Islam as the Religion of Abraham.

The Patriarch Abraham was the son of a priest of the sun in Chaldea. He refused to worship the sun and the stars of heaven and their idols in the form of Baal and Ishtar in the temple. He was ordered to be burnt to death at the altar of the Baal, yet he did not budge an inch from his resolve and the Almighty saved him.

Thus the basic idea of Islam is not to attach any importance to heavenly bodies and to disbelieve all Astrology, Magic and Divination.

Names of the weekdays of most civilized peoples even today bear the mark of star worship, for instance, Dies Solis (Latin), Sun's Day (Saxon), Ravi-war (Indian), Van Athet (Day of the Sun, Siamese), Tanen ga (Burmese), Nayaru (Sun, Tamil), Surya-war (Rajput), Eric

da (Singhalese), and weekdays in ancient Iran were named after some angel or Ezid.

Previous to Islam, *i.e.*, in the Days of Arrogance (Jahiliyah), the weekdays of Arabs were not free from superstition. The first day, *i.e.*, Sunday, was called "Awwal," the second "Akhwan" of uncertain meaning, the third "Djibar" (or Gemini, a sign of Zodiac), the fourth "Dabran" (a house of the Moon), the fifth Moonis or friend, the sixth Uroobah, and the seventh Shayar.

The Jews had adopted the Babylonian calendar after the captivity. They had adopted Nisan, Adar, etc., for their months, but it is curious that they do not name their weekdays in relation to stars or idols. They call Sunday the first day and so on till Saturday which they call Sabbath or the day of rest. Subaat is also the Arabic word for rest.

It was Prophet Mohammed who either himself or through association with the People of the Bible, *i.e.*, the Jews, changed the old Arabic names of superstitious connotation and called them Yom-ul-Ahad (First day), Yom-ul-Ithnain (Second day) and so on till the sixth day which he named Yom-ul-Jumuah (the day of the meeting or conference). The same system was adopted by the Persians after their freedom from the priest class through the help of the Muslim volunteers.

It was in the thirteenth year of his mission, the second year of Hijran or Emigration to Medina (A.D. 623) that Prophet Mohammed ordered the Muslims to fast in the month of Ramzan. It was the month of December 623 A.D. The Christians used to fast for forty days, from 15 November to 25 December, in memory of the birth of Christ. The 25th day of December was celebrated as a

great festival (Idd) as it is done now.

Mohammed was a great admirer of all religions which ordained the worship of the True God and believed in the life to come. The Torah (Bible) and Injil (New Testament) were specially mentioned by him as books containing the Laws (Al-Kutub) of God. The Qur'an insists that a believer should recognize all the Prophets of God to have given true godly messages for the progress of humanity. Thus the Qur'an ordained that "It has been made a Law that every Muslim should fast in the same manner as do the people who believe in the Laws of God given previously," *i.e.*, like the Christians.

The calendar of the Arabs was luni-solar up to the death of the Prophet. The Benu Kenanah were the astronomers of the Arabs. Their chief was called Calem-mus or Calendus. He used to announce every third year of the Hadj Fair that a month is intercalated for the coming year.

Just like the Hindus and the Jews, this intercalation kept the year divided into months which pointed to seasons. Thus the month of Ramzan always synchronized with the month of November-December. Similarly the seasonal festival of New Year was celebrated throughout the world near the Equinox of 21 March.

Thus the Hadj-i-Akbar of the Arabs, the Navroz of Iranians, the Holi of India and the Passover of the Jews were celebrated as the spring festival everywhere. Similar festivals were held at the middle of the year in the beginning of winter at the Autumn Equinox, near the 21st September and were called Haj-i-Asghar (in the month of Rajab which means the middle finger), Nim-Sardah (in Iran), Dussehra (in India) and the New Year of the Abyssinians.

RELIGIOUS ASPECTS OF REVISION

By Earl T. Strickler, F.R.S.A., F.B.H.I.

Secretary of the National Association of Watch and Clock Collectors

Among American horologists, Mr. Strickler is the only one who has been internationally recognized by fellowships in the British Horological Institute and the Royal Society of Arts. He defines horology as "a science which deals with all aspects of time measurement"—and which therefore includes problems of the calendar as well as clocks and watches. His recent article in the American Horologist and Jeweler on the subject of calendar reform brought him a flood of comment, pro and con. Several of his correspondents asked him about Sabbatarian opposition, and this article is his reply.

IN my section of the country there are a few ardent religionists who distrust calendar reform on religious grounds. I think their fears are baseless, but I respect their sincerity, and I honor the inquiring mind. It would give me a great deal of satisfaction if, out of my scientific experience and historical knowledge, I could help to clarify their thinking. For I believe that God—their God and mine—is always on the side of Truth and Progress.

This is not the first occasion on which improvements in time measurement have been challenged by religionists. Ptolemy of Egypt, Caesar of Rome, Pope Gregory, Omar Khayyam, Sultan Malik Shah and other public-spirited calendar reformers encountered the same kind of opposition. The adoption of Standard Time in 1883 was bitterly fought by certain religious minorities, both in America and abroad.

A less familiar example, taken from American history, was the controversy 125 years ago as to whether public clocks should be set by *sun time* or *mean time*. It started when a new clock, the finest instrument obtainable, was installed in the tower of Center Church in New Haven,

Connecticut, facing Yale College. The designer and maker of the clock was 55-year-old Eli Terry, a great artisan and perfectionist.*

Mr. Terry, in his wisdom, knew that no clock could agree with the sun. In his quest for perfection, therefore, he built an instrument which would keep, not the *apparent time* which was generally accepted, but the *mean time*, or as he called it, the *true time*.

For a while pandemonium resulted. Articles berating the clock and its builder as profaners of religion, appeared in

*Eli Terry (1772-1852) was one of the leading industrial pioneers of New England. He began his career as a clockmaker's apprentice at the age of 14. In his late twenties he developed an original method of making clocks on a wholesale basis, in a small shed which became the first clock factory in America. His enterprise, much ridiculed at the time, expanded until it was turning out nearly 1,000 clocks a month. His early product was a "hang-up" or "wag-on-the-wall" clock, all parts being made of wood. Later he built precision clocks in brass and invented numerous ingenious improvements in time-measuring devices. One of his partners was a young man named Seth Thomas, who also became famous in horology. Eli Terry's story is admirably told in a book published by the Princeton University Press, *Young Father Time*, by Barrows Mussey.

newspapers and religious periodicals. Much as is the case in today's calendar reform controversy, the primary subject of argumentation was often left far afield through foggy thinking and muddled interjection of specious statements which purported to support the general position of the controversialists, pro and con.

Eventually the arguments died down and were buried, chiefly through a scholarly elucidation of the whole matter in the *Connecticut Journal* of 27 March 1827. The article, signed "A Citizen of the United States," clarified in simple language the real difference between *mean time* and *apparent time*. Research by Mrs. Millicent Hull of Bristol, Connecticut, indicates that the author was no less an authority than Mr. Terry himself.

For the present-day record, I want to quote this article in its entirety. In a way, it is an excellent answer to certain religionists* who are currently maintain-

ing that "we reckon time by the sun . . . this luminary is our criterion . . . our present-day calendar is predicated on its reckoning, as has been done since the beginning . . . and no change from this system can be tolerated by those who follow accepted Christian custom." So here is Mr. Terry's article:

Mr. Editor: The following is designed particularly for those who, being unacquainted with the rudiments of astronomy, do not understand the distinction between *apparent time* and *true time*.

Mean time is that which a clock would show provided it were perfect—made hours of exactly the same length, and came out right at the end of every year. *Apparent time* is that which is shown by the sun: and by this, the days from noon to noon are not of equal length, nor, of course, are the hours. There are no two days in the year of exactly the same length by the sun, and here is the reason that time so measured is denominated *apparent time*.

Mean time is so called because it is the exact average, or *mean*, between the different extremes of the sun's variation. The earth, it is true, revolves upon its axis in equal times; but one revolution does not make one day, for while the earth is making one revolution, it passes along in its orbit nearly one degree, so that more than one revolution is performed in order to bring the same meridian to the sun again, and complete the day.

This would cause no difference in the length of the days, if the earth's orbit, or annual motion, were a circle; but it is an ellipse, and the earth, like all other planets, performs equal areas in equal times. Of course, when farthest from the sun, it moves in its orbit slower, and the meridian comes to the sun sooner; but when it is nearest the sun it moves faster, and presents the meridian to that luminary later.

Another cause of the sun's variation is that the planes of the equator and of the ecliptic are at angles. This would of itself make the days shorter when the sun is at, or near, the equinoctial points, for then the annual motion of the earth is $66\frac{1}{2}$ degrees at angles with its axis, on a meridian facing the sun. But at other seasons, when the annual motion is nearly at right angles with

*I have in mind particularly a recent article in the Sabbatarian publication, *Liberty*, by A. H. Rulkoetter, Ph.D. In a rather disjointed array of arguments against calendar reform he says, for example: "Let business make such changes, but permit mankind throughout the world to live its established religious convictions undisturbed." He mentions in his opening paragraphs that "somebody is roiling the waters of time," ignoring the fact that his inaccuracies and misinformation will probably do more to stir up turbid waves of apprehension than "the lonely voice" of the calendar reformers, which he opposes. It seems to me that his is the "voice crying in the wilderness of despair and misunderstanding." . . . His main objection to calendar reform, when all is boiled down, is that it represents change from "accepted custom." He maintains that "what was good enough for my grandfather is good enough for me." Of course, by the same token he should be using a sand glass and a clepsidra instead of modern clocks and watches. Oddly enough, those who insist that their breakfast eggs be boiled exactly three minutes (and not by a sundial) are content to accept a calendar which is inaccurate and temperamental as a sundial.

any meridian passing the sun, the days must necessarily be longer.

The two causes of variation operating together make the time as measured by the sun irregular and unequal, so that no clock, however perfect, can keep time with the sun, unless by means of additional and expensive apparatus. Those who attempt to keep *apparent time* with common clocks must alter them not merely to correct their own deviation from equal motion, but also frequently to follow all the different variations of the sun throughout the year—sometimes faster and sometimes slower, or forward and backward. And after all the pains that may be taken, such clocks will not show either *apparent time* or *mean time*, because by such alterations the time is lost. And when the alterations are successively made, the sun again varies from the clocks, so that *apparent time* is soon lost.

Besides, if all the people on the same meridian, whenever their clocks run down or need correcting, were to set them by the sun without allowing for variation, the consequence would be that no two clocks would agree unless they happened to be set on the same day. If *mean time* is kept, no clock, watch or timepiece whatever needs alteration any more than from its own imperfections, and in case of any such variation, the almanac shows how to set it right again.

If *apparent time* be understood, it requires little skill to regulate a clock by *mean time*. Nothing more need be understood than this: that when the almanac says "sun fast of the clock" a certain number of minutes, the clock will be, if right, so many minutes "slow of the sun," and when the almanac says "sun slow of the clock" any number of minutes, the clock should be so much faster than the sun.

Common clocks keep better time than is generally supposed, because those who do not understand think their clocks wrong when they differ from the sun. This is not true, for suppose a clock, by duly varying the length of the pendulum, were made to agree with the sun through the month of September: the owner, if he did not understand *apparent time*, would say it had performed with exactness. However, were it to run the same rate until the last of January, it would then be one hour faster than the sun. Whereas, had it been permitted to keep *mean time* exactly, it would not have varied 17 minutes from the sun, at any one time,

during the whole of those five months in which there is the greatest variation of sun and clock.

From the above remarks it follows that a common clock cannot keep *apparent time*—that the use of clocks and watches is to keep *mean time*—that to keep *mean time* is the only way to ascertain *apparent time*, and the only way to keep the different time-pieces together. So long as the phrase "sun and clock" is not understood, it is immaterial which is called *true time*; and no one who does understand needs any person to tell him which is *true time*.

Mr. Terry's article is a remarkably skillful exposition, in simple language, of a highly abstruse and technical situation. I envy him his ability to accomplish such a triumph in literary achievement. He was successful, moreover, in overcoming all the opposition of the religionists.

If he were living today, he would, of course, be an advocate of calendar reform (as practically all horologists are, because their profession is based on the principle of keeping time correctly, conveniently and accurately). He would find that the opposing religionists are again bringing up foggy arguments and muddled thinking. He would find them intimating that our calendar of today has "a particular and definite religious significance," and that we have inherited the seven-day week in unbroken continuity, directly from the beginning—the Creation, in fact.

Yet the Jewish Scriptures, our oldest religious literature, give us no clear information as to how time was reckoned in the ancient world. "The evening and the morning were the first day" is the earliest Biblical description of a period of time whose duration we cannot surely estimate. A week is thus defined: "On the seventh day God ended His work

which he had made, and He rested from all His work which He had made."

Further on in Jewish history, we find the day divided into four parts, and the night into three watches.

This mode of computation seems to have lasted until long after the advent of Christianity.

In short, the accurate measurement of time is a recent innovation, although we are asked to believe that the calendar has somehow a divine origin. As one Sabbatarian puts it: "The present calendar is universally known as the *Christian* calendar,* and it has a religious or sacred connotation because it was promulgated by Pope Gregory." The Vatican has never made such a claim, and in fact has definitely stated that it finds no dogmatic objection to a civil reform of the calendar. Cardinal Mercier, one of the greatest Catholic leaders of his time, presided at the international astronomical conference which launched the current movement for calendar reform in 1922. A Catholic writer dismisses the Sabbatarian argument with this comment: "How may the word *sacred* be applied to the calendar of any period? A calendar is a mundane and worldly thing, and my dictionary defines *sacred* as being some-

thing 'made holy; not profane or common.'"

A recent article in a Sabbatarian publication bemoans calendar reform with this gem of over-statement: "The economic problems would be of minor consequence in comparison with the religious. The Sabbath, or Lord's Day, is determined by the weekly cycle of seven days as fixed by God. The eight-day week, whenever it occurred, would result in seven days intervening between successive Sabbaths instead of six days. God's holy day would thereby become a vagrant itinerant, wandering through the days of the week, and changing twice in leap year." Such naive reasoning is startling in this scientific age.

Unfortunately the very writer who wishes to bolster his argument by adhering to the customs of the ancients with the crutch of church history has overlooked some pertinent facets of that history which contradict entirely his lament that the Sabbath will be lost under The World Calendar.

The old Egyptian system, prototype of our present calendar, was composed of twelve 30-day months, each divided into three *decades*; then at the close of the 360-day year, five feast days were added to complete the 365-day year. The Julian calendar was an adaptation of the Egyptian system, but it took the five extra days and distributed them through the year, and added a new day every four years. Then, in 321 A.D., an entirely new feature was introduced into the calendar by Constantine the Great. He commanded the observance of the seven-day week, and appointed the first day of the week—Sunday—as the Christian day of worship. (If you consult your own calendar, you

*Such a terminology is incorrect. Our calendar is not Christian in origin. It descends directly from the Egyptians, who originated the 12-month, 365-day system. A pagan Egyptian scientist, Sosigenes, suggested this plan to the pagan Emperor Julius Caesar, who directed that it go into effect throughout the Roman Empire in 45 B.C. As adopted, it indicated its pagan origin by the names of the months—called after Janus, Maia, Juno, etc. The days were not named, but were numbered on a complicated system involving Ides, Nones and Calends. It was not until 321 A.D. that the seven-day-week feature was added, when the Emperor Constantine adopted Christianity. Oddly enough, for his weekdays he chose pagan names which are still used. . . .

will see that Sunday is the first column from the left.) This was the first distinctly religious feature ushered into a civil and scientific calendar, and it was not pre-ordained nor written on tablets of stone, but was the whim of a Christian ruler who exercised his regal arbitrary power, without doing much thinking about what the result would be.

Another calendar with a lesson is the one used by the ancient Hebrews. In the third book of the Old Testament is described one of the earliest recorded efforts to organize a calendar with *days of worship*. It is the "pentecontad" system of 49 days with seven Sabbaths, that ended with a 50th day—an extra Sabbath added as a *special offering to the Lord*. With the close of the 50th day, a new series of 50 days began, and so continued in rotation.

When the Hebrews were conquered by the Babylonians, a grave danger arose that they might be assimilated. Their zealous religious leaders endeavored to counteract this danger by an extra emphasis on religious rites and customs. They concentrated especially on the Sabbath day of worship, and formulated their own tenet of the unbroken sequence of the seven-day week. Here again we find no order laid down by Holy Writ, but a political and economic need met by religious leaders who had the acumen to recognize a means toward an end, and in order to arrive at this end, they deliberately and willfully abolished the extra day, the *special Lord's Day*. This ruthless sacrifice of a day of worship was not accepted calmly, for we are told that as late as the second century before Christ contentions and discussions were

still going on among Hebraic leaders regarding the discarded day, notwithstanding the fact that the doctrine of the unbroken continuity of the week had been in effect and usage for several hundred years.

Now, the very foundation of Christianity—and of most other major religions—is the Brotherhood of Man. There should be rejoicing everywhere among religionists that an ancient *special day*, abolished solely for national and local reasons, is now being reinstated for international observance, uniting all nations as one.

Religious leaders should welcome the challenge—and the privilege—of promoting this extra day each year as a Day of Prayer, of church-going, of meditation. How can there be any religionists so enmeshed in the tangled web of tradition and custom that they cannot see the merit and importance of such an observance? It is the universal acceptance of one day of worship in every week that is of transcendent value, and not the later theory of the unbroken continuity of the week.

When it is considered that the custom of adding an extra day at the year-end is derived from the Hebrews, that its revival comes from a Roman Catholic priest (Abbé Marco Mastrofini) and that its adoption is approved by most of the great Protestant church bodies of the world (as well as by Moslems, Hindus, Taoists and others), it is clear that from a religious viewpoint The World Calendar has vital elements of unity and fellowship for all creeds and races. The new World-day, observed universally by all nations, will have a stabilizing influence in its annual recurrence, and will tend to unite mankind.

NEWS BULLETINS

VIENNA.—Recent developments regarding the establishment of a perpetual World Calendar have been studied with interest by the competent Austrian authorities, having been brought to their attention particularly by the local affiliate of the International Chamber of Commerce. It is recognized here that a world-wide interest in this matter is gradually increasing, due in part to the action of several member states of the United Nations in bringing it to the attention of the Economic and Social Council. Should ECOSOC deal with this question affirmatively, there will be positive support from Austria.

PORT-AU-PRINCE, Haiti.—In a statement from the Ministry of Foreign Affairs, the government of the Republic of Haiti announces that "the important question of calendar reform is again being studied," with a view to presenting it for endorsement by the Tenth Inter-American Conference of the Organization of American States, to be held in Caracas.

PANAMA.—Dr. Juan Rivera Reyes, President of The World Calendar Association of Panama, has left for New York City, where he is one of the Panama delegates at the General Assembly of the United Nations. An international lawyer, Dr. Rivera has been active in the calendar reform movement for 15 years. In 1950 he presented it before the Geneva meeting of the World Federation of United Nations Associations. He is the author of an 84-page monograph in Spanish, *Un Calendario Perpetuo Para El Mundo*, published in 1952 by Editora Panama America.

ROME.—Revision of the calendar is on the agenda of the September Congress of the International Institute of Statistics. The subject was sponsored for consideration by Professor Joseph Girard of the Paris School of Political Sciences, a division of the Sorbonne University.

PARIS.—It is announced that the French Standardization Organization (AFNOR) has elected The World Calendar Association to honorary membership. The two groups have been working together for the past two years on problems of calendar standardization.

NEW YORK.—The "Calendar Contrast Cards," which have been issued annually for several years by The World Calendar Association, are again available in quantity for distribution. The 1954 issue is printed in olive and blue, 2½ by 3½ inches, showing the calendar for the new year as contrasted with the perpetual World Calendar. A supply of these cards for your personal use will be sent on request.

CORRECTION

One of the most valued British friends of calendar reform is Dr. L. E. C. Hughes, a chartered electrical engineer, a Doctor of Philosophy and a Fellow of the Royal Society of Arts. He is not only a recognized research expert in the fields of communications, sound recording, electronics and atomic research, but also thoroughly at home in such broad cultural areas as higher education and the theatre, and a member of the standing committee of Convocation of the University of London. But the June *Journal* was incorrect in describing him as a "professor."

"In Great Britain," he writes, "the word *professor* is a special academic title conferred by universities under the law. I am not a professor but a *lecturer* at the Imperial College of Science and Technology, a part of the University of London." The editor stands corrected. Perhaps subconsciously, Dr. Hughes was promoted to a professorship in accordance with Arnold Bennett's aphorism that "editors often say a thing that isn't true, in the hope that if they keep saying it long enough, it *will* be true."

NEW BRITISH TIME MACHINE

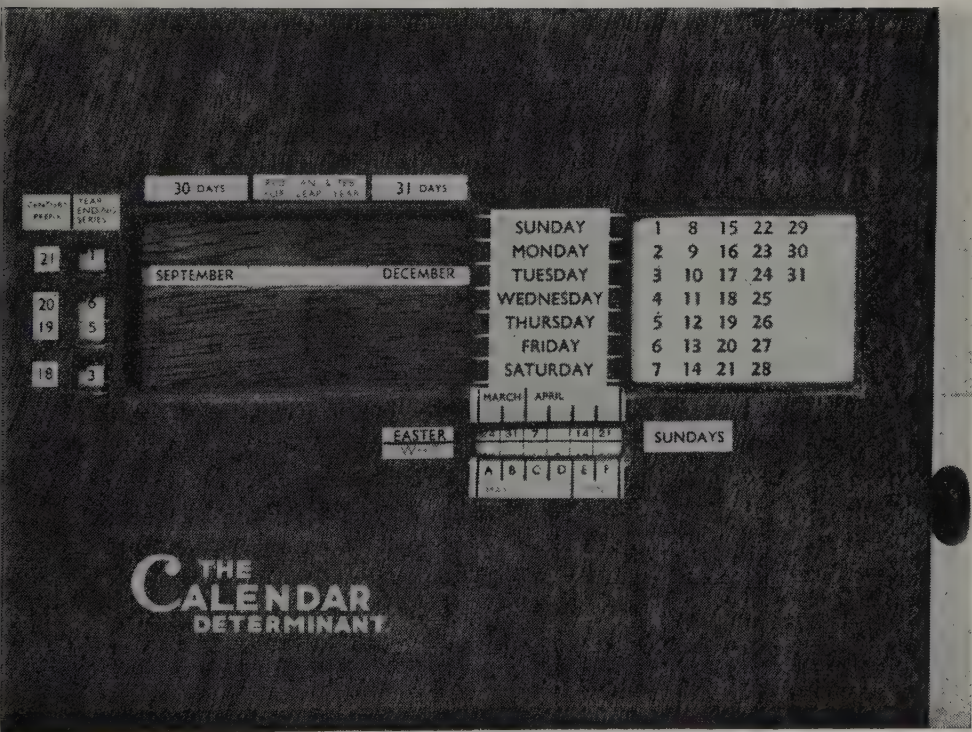
From a Bulletin issued by the British Section of The World Calendar Association

MANY attempts have been made by inventors to construct a mechanical device which will automatically and instantly show the day of the week for any date—past, present or future. The problem is a difficult one, because of the irregularities and inconsistencies of the present calendar. “It verges on the impossible,” says the inventor of one of the current electronic calculating machines which the popular press calls “robot brains.”

However, the problem appears to have been solved by a British experimenter

who is marketing a compact little gadget called a “calendar determinant.” The device was unveiled to the public for the first time at a meeting of the British Section of The World Calendar Association held at the House of Lords in London.

Its inventor is Osmond Robin of Croydon. He has spent several years of patient study and experiment in perfecting his machine, which by the simple movement of two slides can display the calendar for any Gregorian month from January 1800 to the present time, or as far into the future as is required. Thus



the weekday incidence of any date is immediately shown.

The box which was demonstrated at the House of Lords was limited to a period of 400 years—from A.D. 1800 to A.D. 2199. These limits can be extended indefinitely in both directions by adding to the length of the tape on interior slides and rollers.

In addition to the useful weekday results, the machine also shows the dates of Easter and Whitsuntide—a matter of great importance in England for solving legal and business problems.

Mr. Robin, a native of Guernsey in the Channel Islands, is a secretary-accountant who has had a lifetime of professional experience with calendar calculations and has also made the study of calendars his personal hobby. Since 1947 he has been working on his Determinant, and in his own private workshop he has completed several models, continuously simplifying the design to make it as compact and convenient as possible. In bringing his work to the attention of The World Calendar Association in London he wrote:

"For your information, my Calendar Determinant is now perfected to the point where it can carry calendar information for all time. My desk model, which is limited to a period of 400 years, measures 10 inches by $7\frac{1}{2}$ inches. It includes a device for registering the dates of Easter and Whitsun, and shows instantly the weekday setting of Christmas and New Year's. It makes allowance for Leap Years and completes all necessary calculations instantly."

This letter seemed an extraordinary and almost impossible claim, and a representative of The World Calendar Association called on Mr. Robin at his Croy-

don laboratory to find just how far it could be substantiated. It was found that his device, which took the form of a 10-inch panel carrying a calendar and a perforated slide, with behind it a small roller carrying a series of numbers, the whole standing comfortably on the hinged triangular box carrying the roller, did all that he claimed.

The secret, he explained, was in the arrangement of two charts embodied in the instrument, which showed the months and years, and which fitted in the first case behind the sliding panel, and in the second around the two-inch roller in the base of the instrument.

Its operation was remarkably simple. The seven days of the week were printed on the front of the Determinator. There were two slides, operated from the back and marked respectively "month" and "year." To set the calendar for the present date, one had merely to move the month slide until the current date appeared correctly opposite whatever day of the week it was; and then to move the year slide until the appropriate month appeared in the slot in the panel to the left.

As the one month changed to the next it was necessary only to move the month slide again until the new month was shown in the slot. The calendar for the new month then automatically appeared. A refinement was a third slide which could be used to cover the 29, 30 or 31 figures in the shorter months.

With this last little adjustment, one had a mechanically perpetual calendar. Nothing, it seemed, could be simpler. But that was not all. It would also work backwards. By turning the roller and picking out any year by its two last fig-

ures—as, for example, 02 for 1902—and noting the figure shown above it—for that year it is actually 6—and moving the year slide to bring that figure against the century figure of 18, 19, 20 or 21 printed on the left of the face, there appeared the calendars for 1802, 1902 and so on, requiring only the adjustment of the month slide to find the required month of whichever year was sought. Moreover, the Easter and Whitsuntide Sunday dates for the appropriate years appeared at the same time in a small opening below the calendar, and could be read according to letters on the roller.

The machine seemed amazingly comprehensive, providing all the essentials of a calendar for century after century. It was a remarkable commentary on the inconsistencies of the Gregorian calendar which requires so ingenious a device to enable one to determine a past or future date.

But although The World Calendar, being a perpetual and perfectly regular calendar, will naturally, when it is adopted, dispense with the need for such an instrument, that fact does not make the invention less interesting.

“Historians will still require to know on what day of the week certain dates in the past fell,” Mr. Robin pointed out, “and the Determinator is a quick and simple way of finding out.”

So far as the Gregorian calendar is concerned, his machine is infallible, as was proved when a number of dates, of which the weekdays were known, were checked against it; and since it worked in periods of 400 years—so far as the table model is concerned—could be applied in principle to all past and future time simply by changing the numeration

of the centuries in sets of four. When applied to the Julian calendar, however, allowance has to be made for the dropping of eleven days in September 1752.

An examination of the chart which provides the main calendar gives an idea of how the Determinator operates. While the slot in the sliding panel exposes a given month, a section of an expanded weekly calendar is shown in the other panel. This coincides with a precisely positioned “Easter” panel of which two lines are simultaneously exposed. Only seven lines, of course, of the expanded calendar (corresponding to the seven days of the week) are exposed at one time, and it is the movement of this chart up and down, combined with the small slide which cuts off the unwanted end-days of the month, which enables any of our 28 month patterns to be displayed.

A notable fact about the instrument is that it was developed without any special mathematical or astronomical knowledge on the inventor’s part, but entirely by checking, experiment and calculation. Mr. Robin possesses now not only a veritable museum of experimental mechanical calendars but a deskful of calculations that might well be the envy of an “electronic brain,”—the result of six years devoted work.

Having become a member of the new British Section of The World Calendar Association, Robin is now as a matter of interest preparing a World Calendar desk almanac of the same general style, but, he says a little wistfully, “there is no difficulty about it. Since there are no anomalies and no irregularities beyond the annual Worldsday and the quadrennial Leap-Year Day, the calendar is smoothed out and stabilized.”

TIME MARCHES ON

By Byrd Mock

Time is the soul of the universe.—Pythagoras

Time is all that we can call our own,
Yet time has no beginning and no end.
Time is the basis of all memory;
Time itself is but remembered time.

Alchemist converting dust to stars
And protoplasm into living man,
Time holds the key to the lost ages past
And will unlock the eons yet to come.
A thousand years is but an evening gone
In the agenda of the Lord of All.

Time is man's most precious heritage:
To use it well should be his chief concern,
Making the best divisions possible
To harmonize his life with the Great Plan
Mapped out for us by the Chief Engineer
Who granted us the entity called Time.
But did not furnish us a calendar.
He left that to man's ingenuity.

From immemorial ages of the past
Man has been struggling to adjust his time
To best accommodate his work and play,
To follow a set sequence and repeat
This pattern perfectly from year to year,
Adapting the four seasons to his need.

The whirling earth, a never-failing clock,
Gave man his first real measurement of time
The vaulted sky was man's first calendar,
The Pleiades appearance his New Year.

Man's first crude calendars were made of stone,
From Neolithic Age to Mayan times.
An Aztec calendar is still extant,
Skillfully carved and weighing fifty tons.

The Bamboo Books of ancient China give
Their first recorded way of counting time.

Inventors of the oldest calendar,
Egyptians counted time by stars
And built their ageless pyramids to stand
As monuments to timelessness as lived
In the historic valley of the Nile.

When Julius Caesar came to power in Rome
He ordered sweeping calendar reform.

The Jews proclaimed the seven-day device
To emphasize their Sabbath's sacredness.

Before the new World Calendar idea,
The nearest to perfection we have had
Was given by Pope Gregory Thirteenth
In Fifteen-eighty-two; he found defects
In Julius Caesar's famous calendar
Then in use throughout the Christian world.

Pope Gregory's reform has served us well
But it is now outmoded in its turn,
And so the time has come for us to change
To a simpler, better calendar
Conserving time and money, speeding up
Production, saving labor, capital,
Anchoring our roving holidays,
Combining them wherever possible
With weekends to increase efficiency.
Just as the good old horse and buggy days
Gave way to autos and to aeroplanes,
Our outgrown calendar should be replaced
By The World Calendar so well designed
To meet the challenge of the Atomic Age.

Many members of United Nations
Have given strong approval to the change
While none have so far openly opposed
This timely effort to conserve our time,
A plan supported by famed scientists
And great world leaders, noted clergymen.
The movement for this calendar
Began in Eighteen-thirty-four
When Abbe Mastrofino, learned priest,
First proposed the annual extra day
Which The World Calendar will call *Worldsday*,
A holiday for all to end the year.

This new time-reckoning, time-saving gift
To a distracted, harassed, war-torn world
Will be received with gratitude by all
Who are striving for a lasting peace.
The new World Calendar will give a sense
Of unity to peoples everywhere,
Regardless of their color, race or creed.
The whole wide world will move in harmony
With the march of time, with dates and days
The same from year to year—a helpful change.
"One World Calendar for One World" then
Will help to bring good-will and peace on earth.

What though our time be sadly "out of joint,"
The new World Calendar will "set it right";
And so the earth will spin in Harmony,
Order, Balance and Stability.

INTERNATIONAL DATE LINE

By James Stokley

General Electric Research Laboratory, Schenectady, N. Y.

(In The Scientific Monthly)

WITH the increasing importance during the past few years of events in Japan, China and Korea, differences in time have been strikingly called to our attention. For example, it is a familiar experience to sit at home on a Sunday evening and hear over the radio about something that happened a short time before—on Monday morning in Tokyo. And although we realize that this has something to do with the International Date Line, which passes through the western Pacific, some of us are not too sure as to just what this involves.

First of all, our time is based on the turning of the earth from west to east, which makes the sun and the other celestial bodies seem to turn around us from east to west. The day is based on the time it takes for one complete turn, as measured by the average length of time from a moment when the sun crosses the meridian, directly south, until it does so again.

A place south of us obviously is not south of a point farther west; so that, when the sun is on our meridian in New York, marking noon, it has not yet reached the meridian of Chicago. There it is 11 o'clock in the morning. The sun is still farther from the meridian at Denver, where it is only 10:00 A.M.

This, of course, is the reason for time zones, and why it is necessary to set one's watch back an hour for each 15 degrees of longitude traveled to the west.* Going all the way around the earth in this direction, one would set his watch back an hour 24 times, and would find himself a day behind his friends who had stayed at home—were not something done to correct it.

But something has been done. It was decided by international agreement in 1884 to set the calendar a day ahead at some stage of the westerly trip around the world. The place for this is called the International Date Line, which approximately follows

* The official explanation of this situation, as published by the U. S. Navy's Hydrographic Office on its charts, is as follows: "To provide for keeping Standard Time at sea, the surface of the globe is conceived to be divided into 24 staves or zones each bounded by meridians 15 degrees of arc or one hour of time apart in longitude. The initial zone is the one which has the meridian of Greenwich running through the middle of it, and the meridians $7\frac{1}{2}$ degrees east of Greenwich and $7\frac{1}{2}$ degrees west of Greenwich marking its eastern and western limits; it is called the zero zone because the difference between the standard time of this zone and Greenwich-mean-time is zero. . . . Each of the other zones is designated by a number representing the number of hours (plus or minus) by which the standard time of the zone differs from Greenwich-mean-time. . . . In the vicinity of land, the boundaries between zones are modified so as to conform to the boundaries of the countries or regions using corresponding time. In actual practice the boundaries of time zones are determined by the frontiers of countries."

the meridian of 180° longitude. West of this line it is always the day after the one being marked to the east. Therefore, moving westward, one always shifts forward a day at the line, and he goes back a day on an easterly passage.

If all places on earth had regular time zones, then the date line would be the place where the new day is born. It would begin at noon, Greenwich time (which is 7:00 A.M., Eastern Standard Time, or midnight at the line). Suppose it has been Sunday. Then Monday starts and advances toward the west with the shift of the meridian that marks midnight. After three hours (10:00 A.M., EST) it has reached Japan, and after six and a half hours (1:30 P.M., EST) the new day reaches India. It comes to central Europe eleven hours after it began (6:00 P.M., EST) and to England and western Europe an hour after that.

Seventeen hours after it began at the date line, Monday reaches New York. Five hours after that it reaches the Hawaiian Islands—at 5:00 A.M., EST—and two hours after *that* the meridian marking midnight reaches the date line once more. Tuesday then repeats the process. Thus, people in Tokyo are having their Monday luncheon when people in New York are going to bed Sunday night, and residents of Hawaii are enjoying a late Sunday afternoon stroll on Waikiki Boulevard.

Actually, of course, the day does not advance smoothly around the world, but in 24 principal steps. Each covers an average of 15 degrees of longitude, or one of the time zones. It becomes Monday all at once from Maine to Michigan and an hour later does the same from Kentucky to Texas. There are many variations from strict adherence to the time zones. On an isolated island in the Pacific, for example, there would be little advantage in using the time of the central meridian of the zone it happens to be in, and many such islands make use of their local time as standard.

Honolulu is practically on the border between two zones, so until a few years ago Hawaiian time was five and a half hours behind Eastern Standard. However, increasingly close contact with the mainland, by means of radio programs, air travel, etc., led in 1947 to adoption of 150th meridian time, which is only two hours behind Pacific standard and five behind EST.

In the time zone through which the date line passes—that is, the one with the central meridian of 180° longitude—some curious things happen in regard to the date. Normal standard time here would be just 12 hours different from Greenwich—fast for places west of the date line and slow for those to the east. In other words, it is the same time, but different days. Compared with EST, 180th meridian time would be seven hours slow to the east of the date line, and 17 hours fast to the west.

The date line, however, does not follow the 180th meridian precisely but has several kinks in it. This is done to prevent the complications that would arise if one group of islands, right on the meridian and under one political administration, had two different days in two different parts of their territory. One of these kinks, to the west, includes the westernmost of the Aleutians; the other, to the east, takes in many of the islands of the southwest Pacific.

The Chatham Islands, east of New Zealand and under its sovereignty, are included in this region. They observe time that is 12 hours 15 minutes fast of Green-

wich. To the north of them are the Tonga Islands, which the noonday sun reaches still earlier, so their time is 12 hours 19 minutes 12 seconds fast of Greenwich. It is said that an even greater difference is arbitrarily observed in Wrangel Island, a Soviet possession just north of the easternmost tip of Siberia. Although on the 180th meridian, this island, according to the best information available, uses time that is 13 hours fast of Greenwich, or 18 hours ahead of New York standard time. In other words, the inhabitants of Wrangel use permanent daylight saving time.

To the east of the date line the slowest time is apparently that used on Niue Island and Savage Island, which is 11 hours 20 minutes behind Greenwich, or 6 hours 20 minutes behind the eastern United States. No place, so far as we know, uses time any slower than this.

All this leads to a curious situation regarding the length of the day. To most people, of course, the day lasts 24 hours, which is perfectly true—for one location. But, one may ask, how long does a single day survive some place on the earth? If the day starts at the date line, takes 24 hours to encircle the globe as it pushes the previous day out of existence ahead of it, then itself is squeezed into oblivion through another 24 hours as the next day advances, it would last a total of 48 hours. This, however, does not allow for such complications as Wrangel, Tonga, and Savage Islands.

It is at Wrangel that tomorrow began, at 6:00 A.M., EST, this morning. At about 6:40 A.M. it started at Tonga, and at 6:45 at Chatham. At midnight tonight it will reach us 18 hours after it began, and today will become tomorrow. But tomorrow morning at 6:00 A.M., EST, the day after tomorrow will start at Wrangel, to follow the career of its predecessor.

At 6:00 A.M. tomorrow, however, by New York time, it will still be today in many of the Pacific Islands just east of the date line. Moreover, at the last place to have a particular day, Savage and Niue Islands, it will still be today until 6:20 A.M. tomorrow by EST. Tomorrow will not end there until 6:20 A.M., the day after tomorrow, by New York time. This will be 48 hours 20 minutes after tomorrow began this morning in Wrangel, so the one day will have lasted a total of 48 hours 20 minutes.

Perhaps this would be clearer if tabulated for a particular day, such as that of the vernal equinox, which in 1952 occurred on Thursday, 20 March.

TABLE			
NEW YORK DATE	EST	LOCAL TIME	EVENT
Wednesday, 19 March	6:00 A.M.	Midnight	20 March begins at Wrangel
	Midnight	"	20 March begins at New York
Thursday, 20 March	6:00 A.M.	"	21 March begins at Wrangel
	6:20 A.M.	"	20 March begins at Niue and Savage
	Midnight	"	20 March ends at New York, 21 March begins
Friday, 21 March	6:00 A.M.	"	22 March begins at Wrangel
	6:20 A.M.	"	20 March ends at Niue and Savage

This shows, incidentally, that for 20 minutes, from 6:00 A.M. to 6:20 A.M., EST, three different days are simultaneously in existence in some part of the earth. During this period it is tomorrow at Wrangel, yesterday at Niue and Savage, and today in the rest of the world.

EXCERPTS AND REVIEWS

Rational Streamlining

By HANS G. ALDOR
(In *Bank World*, Stockholm)

ALMOST all human activities are now mapped out with the help of statistics. From cradle to grave we have to give information on ourselves, our activities, our habits and our utterances, and this information is duly translated into charts, curves and diagrams by specialists who use it as a basis for future planning.

Within the world of banking, as in other phases of industry and business, general statistics play a preponderant part. But there are certain factors which unnecessarily complicate the use of such statistics for the calculation of salaries, interest, taxes and all varieties of monthly payments. One of our depositors, whose operations we follow with meticulous care, has his best sales on Saturdays, and the other weekdays have varying values. We have difficulty comparing his monthly figures with past years whenever a month has five Saturdays instead of four. While corrective adjustments are possible, they are not easy, and the distortion is annoying. Similarly, our comparisons between different months in the same year are tricky—and here there is an added factor of deformity because the length of months is variable.

Our transportation customers complain about the considerable work and expense caused by the new time-tables which have to be formulated at frequent intervals, owing to calendrical factors such as wandering holidays. Similar difficulties are encountered by all educational institutions, from kindergartens to universities, where the scholastic calendars are continually being juggled about because of the shifting pattern of weekdays.

In all these matters we come back to the inevitable question, can something be done to rationalize the present calendar system?

This problem has been exhaustively studied by an international organization called The World Calendar Association. Its proposal for a revision of time measurement has already received the nod of approval from 17 governments and countless international organizations. Its plan is based on an ingenious idea launched 120 years ago by an Italian priest, Marco Mastrofini, and put into practical form during the intervening period by scientists and statesmen from Switzerland and other countries.

The subject has been tentatively discussed several times at the United Nations. There appears to be no serious opposition among the member states. Leadership from the Great Powers is, however, lacking; but if such leadership can be developed, a favorable result would appear inevitable.

Where Does the Year Begin?

(*Chicago Sun-Times*)

OUR calendar year is based on one complete trip of the earth around the sun. But where does the year begin? "Not necessarily on the first of January," says Wagner Schlesinger, director of the Adler Planetarium, pointing out that nothing new occurs in the sky on that date.

Only the Western nations observe 1 January as the year's beginning. India, with 30 different calendars, has a dozen New Year's dates, running all through the year. Jewish and Chinese calendars have their own systems. Followers of Mohammed go by a lunar calendar with a wandering New Year.

There is hardly a day in the year that has not been observed as New Year's somewhere in the world during the past fifty years. In olden times, even the Western nations changed their New Year's habits frequently. Sometimes they began the year at Easter, or Christmas, or a solstice date, or the date when some king ascended the throne. Certain Christian theologians have been very

sistent in arguing for Christmas Day as the year's beginning—because the years are numbered before and after the birth of Christ.

A prominent English astronomer has found an astronomical justification for January as the year's beginning. He points out that somewhere on or about that date the earth is at its shortest annual distance from the sun.

Midweek Holidays

By BILL LEONARD

(C.B.S. Radio Commentator)

MIDWEEK holidays are the cause of much discontent. On every such occasion the calendar plays a trick on practically everybody who works for a living. We have just endured a Thursday holiday. Then back to work on Friday, then two more days off Saturday and Sunday. What might have been a bang-up week-end was chopped off before it could get well started, and the same thing will happen again and again and again.

Each such occurrence is a big argument for calendar revision, as proposed by The World Calendar Association. This organization spearheads a reform which makes sense to anybody who gives it thoughtful consideration. Once we get a perpetual calendar our state legislatures can shift the legal holidays around so that practically all of them come on either Friday or Monday, thus providing at least six or seven three-day week-ends every year.

Astronomers' Interest

By VICTOR W. KILLICK

(Astronomical Society of the Pacific)

IN my travels through Pacific Coast areas I have recently found a substantial growth of public interest in Calendar Reform. This is a development of the past year or so. Only a few years back, when I spoke of an impending calendar change before group

meetings, my audiences looked puzzled. Today, I am glad to report, they are familiar with the subject, and there is a serious interest in it wherever I go. People ask intelligent questions and are generally favorable.

This is a healthy sign, and an indication that the educational groundwork of the past decade is paying off. I give a weekly astronomical broadcast to a radio audience of over a million, and every few months I devote a program to discussions of calendar matters. Calendar reform is also stressed in our college courses in astronomy.

As you know, many of the world's most famous astronomers attach importance to calendar revision in their publications and public talks.

150 Planetarium Lectures

(Philadelphia Bulletin)

AT the Fels Planetarium in Philadelphia, the current show and lecture, given five times daily, has for its subject "The Calendar—Man's Measure of Time." Dr. I. M. Levitt, Planetarium director, points out that man has never been completely satisfied with his calendar, and has always realized its shortcomings. Nevertheless, changes have invariably been resisted strongly. It was so in Pope Gregory's time, and again in England in 1752.

Today there is a new movement centered on the United Nations, for a World Calendar "geared to the needs of modern civilization." The new calendar would be perpetual; that is, it would not change from year to year. Once it was adopted, there would be no great difficulty in adjusting all holidays so that they would fall on week-ends, thus avoiding the split weeks which are expensive and annoying to everybody. The lecture closes with a discussion of what life would be like under this new calendar.

The Calendar show will run through the month, and will be repeated nearly 150 times during that period. Assisting Dr. Levitt with the lectures are Professors John Streeter, R. W. Neathery, A. A. Faulkner and William L. Fisher.

RECENT CALENDAR RESEARCH

More About Monday Holidays

By H. R. HELSBY

(Editor, Olean, N.Y., Times-Herald)

MOST businesses have realized for some time that a mid-week holiday is a disrupting and expensive occasion. And a growing proportion of our people have come to realize, also, that a thorough calendar reform would be highly desirable from innumerable standpoints.

But our populace in general may not know that bills have been or will be introduced this year in no fewer than thirty-four state legislatures under which several legal holidays would fall on Mondays instead of on other days of the week.

The general purpose is to alleviate a serious drawback to business and industry, on the one hand, and to provide more long week-ends for recreation and travel for the general public, on the other. The proposed changes would establish four stable Monday holidays.

Support for the changes is coming not only from influential labor, industrial and educational groups, but from the National Association of Travel Organizations, whose member organizations naturally would not be affected adversely by the changes.

This movement for Monday holidays undoubtedly indicates a growing dissatisfaction with the present calendar; and The World Calendar Association believes that once our citizens are sufficiently aroused concerning these four Monday holidays, the way will be paved for a wider application of the same proposal.

This organization points out that the two most important holidays in the year—Christmas and New Year's—can only be stabilized by the adoption of The World Calendar for which it has been battling so strenuously and effectively for many years.

The current movement for a partial cor-

rection of this situation, has come mainly through the persistent campaigning of calendar reformers. Business men, educators and thoughtful citizens everywhere have become convinced of the need for an improved and perpetual calendar. They have been disappointed and impatient over the apathy and delaying tactics of the Truman Administration and the State Department, which in turn had its effect at the United Nations.

Under the circumstances, Americans are taking matters into their own hands, and are seeking some measure of relief by way of their state legislatures. Such direct action in the general direction of calendar reform should arouse Washington to deal more realistically and immediately with the whole question.

World Calendar reform is on the way—and the general movement in the direction of the elimination of mid-week holidays is merely part of that reform.

Work for Washington

(Cincinnati Enquirer)

ALL of us take American efficiency for granted, as something immutable. Yet we tolerate some absurd inefficiencies, merely because they have always been with us. One such is the existing calendar. The months are of varying length, and so are the quarters of the year. Each month starts on a different day of the week from year to year. Holidays come at erratic times.

This is more costly than most persons suspect. Railroads, airlines and bus companies spend millions of dollars a year to prepare and publish new schedules, because of the irregularities of the calendar. Statistical work of industrial concerns is enormously complicated by the fact that the months and quarters have different numbers of working days. Retailers perhaps pay

most heavily of all. A holiday falling on a Friday kills the Saturday for trade, seriously upsets the week's business. Long-range planning is difficult for merchandisers with such an irregular calendar.

There is an easy way out of this extravagance we have inherited with the Gregorian calendar. Nothing but inertia prevents general adoption of The World Calendar. This is the generally accepted solution for the problem of the calendar. It provides quarters of uniform length. Each month always starts on the same day of the week. Holidays stay put. One would scarcely need to consult this calendar. Everybody can memorize it.

Admittedly, the President, the State Department and Congress have plenty of work on hand. But there is no reason why they cannot take the simple action required to put the United States on record in favor of calendar reform. Such action, placed urgently before the United Nations, could insure universal adoption of The World Calendar in a matter of months.

Here is an opportunity for a constructive economy—a step that will save American business millions of dollars and also save the people of the world incalculable confusion and inconvenience.

Don't Blame the Old-Timers

By ARTHUR J. HILLS

(In *Canadian Unionist*)

THERE has been a disposition to blame our ancestors as responsible for the irregularities of the calendar handed down to us. This does not seem to me a proper position to take.

The calendar which Julius Caesar gave us, and which Pope Gregory adjusted in 1582, was good enough for the demands made upon it under the conditions then existing. The Julian calendar was much better than any of its predecessors.

In going as far as he did, Caesar had to disregard Roman superstition which believed strongly in "luck in odd numbers" and wanted all the months to have either 29

or 31 days. It is true that Emperor Constantine in the fourth century injected the week into the Julian calendar (which was designed for Calends, Nones and Ides) without making provision to prevent an overlap or broken weeks at year ends. But under conditions as they existed at the time, the shift of days made little difference.

Even in 1582 there was no industrial life as we know it today. All that worried those responsible for the change was that religious festivals, particularly Easter, were getting away from their proper seasons. It is not for us, in this era of split seconds, of airplanes traveling faster than sound, of instant international communications, to ask why those who lived in days of slower going did not perfect the calendar. Surely this is our task, not theirs.

This is an age when the irregularities of the calendar are a handicap to all operations, large and small. Time has a different value than it had in horse-and-buggy days.

We live in a period when accurate comparisons are highly desirable.

Retail Trade Benefits

By AARON L. LEVITT

(General Manager, *Davidson's Furniture Co.*, Omaha)

I HAD the pleasure of sitting next to Edward Flynn at an Omaha Rotary meeting where he talked vividly about the proposed World Calendar. I mentioned that such a calendar will be a wonderful thing for the retail furniture business, if only because it will enable us to compare exact days with their opposite numbers a year ago.

It so happens that our largest volume is done on Monday and Saturday. At the beginning of each month under our present calendar, we must adjust our figures of a year before so that Monday will match Monday. These adjustments are cumbersome and time wasting. They cost us not only time but money, and extra bookkeeping. Their nuisance quotient is terrific.

It is in such matters that business men find themselves naturally sympathetic with calendar revision plans.

FROM THE MAIL BAG

At a time when there is a good deal of skepticism about the United Nations, it would be helpful all around if its achievements were multiplied, especially along the line of items which do not involve ideology—about which there can be little disagreement, such as calendar reform. Someone has remarked that “ideologies divide, projects unite,” and The World Calendar is a project in which unity may be evoked to advantage.—S. W. Boggs, Washington.

It is my view that the calendar reform movement is steadily approaching its goal.—Sadanobu Inoue, Tokyo.

As far as I can see, there should be no objection to The World Calendar, and I wish you substantial success in forwarding your intelligent move for the new World Calendar in the coming year.—Bradley Kelly, King Features Syndicate, New York City.

In itself, the calendar reform movement is well-founded and can lead to many practical advantages.—Dr. Hilding Törnebohm, President, International Standardization Organization, Geneva.

In my work as a teacher, I find that parents of my pupils are keenly interested in calendar reform. Most of them have never thought much about the inadequacy of our present system, but they quickly see the point and wonder why something isn't done.—J. H. Bilbel, University City, Mo.

To undertake activities for calendar reform I have established close contacts with the competent Federal Office for Statistics in Wiesbaden, and also top organizations in economics.—Dr. Ferdinand Haerecke, Frankfurt, Germany.

It is sometimes disheartening to face, not indeed the hostility, but rather the apathy of the world. In the old days it was only necessary to convince Pope Gregory, and the thing was done. Today so many people have to be convinced, and many of them do not even trouble to understand the propo-

sals. The world is fortunate in having an international association to keep before it the obvious desirability of calendar revision.—W. F. Bushell, Birkenhead, England.

I am earnestly hoping that our labor of so many years may be crowned with success through the adoption of The World Calendar in 1956. I have just written an article on the subject in my mother tongue, Gujarati, for publication in *Akland Anand*, a magazine with a very large circulation printed in Ahmedabad.—Chhotalal M. Kamdar, Vankaner, India.

School administrators will instantly see that The World Calendar will simplify scheduling sports events, one of our present-day headaches.—Arthur Hoogheem, Lyons High School, Clinton, Iowa.

Meeting many types of Australians, I would say that no serious opposition to calendar reform will be encountered here. But as we are a small people in numbers we must wait for the big nations to take the lead. I am sure calendar reform will win in the end.—Prof. W. A. Osborne, Victoria, Australia.

We are keenly interested in calendar reform and shall follow its progress with friendly sympathy.—Dr. Nikola Ignjatovic, Jurist, Novi Sad, Yugoslavia.

For several years I have been wholly in accord with calendar reform proposals. In fact, I often think, what are we waiting for?—Col. C. I. Kephart, Shady Side, Md.

I think The World Calendar is a wonderful step in advance of modern times.—Dr. L. K. Hallock, Jacksonville, Ill.

There is a great need for The World Calendar with its even flow and steady rhythm. One cannot but feel that individuals and nations will of necessity respond to the therapy of its accord and agreement.—George L. Martin, Red Bank, N. J.

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EDITORIAL PARAGRAPHS

Sir Harold Spencer Jones is advocating a World Calendar in which February would have thirty days. This would make hay out of the old rhyme, but the advantages of the plan are obvious.—*London Evening News*.

It takes little thinking to see why the need for a World Calendar has increased every day for the past 30 years. Each day the affairs of all of us become more closely connected with the affairs of all the other people in the world.—*Davenport (Iowa) Democrat*.

Present confusion in our Indian calendars ought to be removed with minimum delay. It is not the government's intention to scrap the old system but only to bring about uniformity for civic, social and other purposes. Support of The World Calendar will help the evolution of a scientific system for the entire world.—*Express, Madras, India*.

In successive issues, this newspaper is presenting the advantages of The World Calendar, compared with the disadvantages of the present calendar. The merits of the proposed change—to business, industry, government and the public—are manifold.—*Milton (Pa.) Standard*.

We hope that the men who manage world affairs will find time soon to adjust and reorganize the calendar. Its irregularities are becoming increasingly burdensome to men of affairs, business leaders, scientists and educators.—*Nouvel Alsacien, Strassbourg*.

In an atomic age there are a lot of awkward angles to a calendar whose main outlines were drafted 2,000 years ago.—*Jamaica (N. Y.) Press*.

As for the practical problem of getting the calendar reformed today, it is neither as simple as some think nor as hard as others think. Resolutions by responsible bodies are necessary, but they will have little effect unless supported by the rank and file.—*Evening Mail, Dublin, Ireland*.

Those who wish to improve the present calendar find their answer in The World Calendar. Everyone will benefit. Business and professional men know at a glance the importance of this change. Its Worldsday

at the yearend, to be celebrated all over the globe in the interest of peace, should appeal to everyone.—*Chandler (Ariz.) News*.

Advocating the cause of calendar reform eloquently at Malvern Rotary Club was an old friend, James Avery Joyce, frequently called Britain's World Citizen No. 1.—*Gazette, Malvern, England*.

We need a stable calendar, balanced and regular, with every date and day always the same, and not the hit-and-miss, hop-step-and-jump arrangement of the present system.—*Butte (Mont.) Standard*.

In a pamphlet issued from London, the Astronomer Royal gives just about as exhaustive a survey of calendar reform as we are likely to get in handy style. The author comes out for The World Calendar as the only plan of revision worthy of serious consideration.—*Halifax (N.S.) Courier and Guardian*.

Let's have an end to these wandering holidays which hit a convenient spot on the calendar only once in seven years. Strange that anything so obviously desirable, and costing nothing, should be so long winning approval.—*Iola (Kan.) Register*.

After listening to Rotarian Edward Flynn's address this week, we are convinced that the proposed World Calendar must be adopted by all countries of the world. Never have we heard a man speak more fluently and convincingly.—*Nouvelles Rotariennes, Quebec*.

In Washington, the State Department approves the supporters of calendar reform as "seeking to strengthen and improve the patterns of world understanding."—*Oskaloosa (Iowa) Herald*.

Our present calendar makes a muddle out of our efforts to count the days. The proposed World Calendar would work out advantageously in many ways.—*Daily Graphic, London*.

Our workaday world of business and labor, legal transactions and accounting would all benefit from the proposed World Calendar.—*Stamford (Conn.) Advocate*.

The World Calendar Association, Inc., will gratefully receive contributions for furthering its work. Such contributions are tax exempt under Federal and New York State Income Tax laws.



After reading please pass on to others.

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Journal of
CALENDAR
REFORM

INDIA'S ACTION AT U.N.

E December 1953

THE WORLD CALENDAR

1ST
QUARTER

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

2ND
QUARTER

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

3RD
QUARTER

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

4TH
QUARTER

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

Worldsday, (a World Holiday), W or 31 December (365th day), follows 30 December every year.
The Leapyear Day, (another World Holiday), W or 31 June follows 30 June in leap years.

In this Improved Calendar:

- Every year is the same.
- The quarters are equal: each quarter has exactly 91 days, 13 weeks or 3 months; the four quarters are identical in form.
- Each month has 26 weekdays, plus Sundays.
- Each year begins on Sunday, 1 January; each working year begins on Monday, 2 January.
- Each quarter begins on Sunday, ends on Saturday.
- The calendar is stabilized and perpetual, by ending the year with a 365th day that follows 30 December each year, called Worldsday dated "W" or 31 December, a year-end world holiday. Leap-year day is similarly added at the end of the second quarter, called Leapyear Day dated "W" or 31 June, another world holiday in leap years.



ONE WORLD CALENDAR FOR ONE WORLD

VOL. XXIII

DECEMBER 1953

No. 4

PROGRESS toward the enactment of calendar reform has been definite and important during the last quarter of the year 1953. The international machinery which has been set in motion at the U.N. aims at placing the subject promptly before the nations of the world for legislative action. The Government of India has undertaken active leadership, sparked by Prime Minister Nehru's statement that "the Gregorian calendar has defects which make it unsatisfactory for universal use."

The purpose of the plan submitted to the United Nations by India on 28 October is "to adopt for the whole world a new, fixed, uniform and invariable calendar, regulated astronomically according to the movement of the earth around the sun, and more regular, scientific and advantageous than the Gregorian calendar." This is the item that India has proposed for the agenda of the Geneva meeting of the U.N. Economic and Social Council next July.

In the view of the India Government, the United Nations does not need to do any further research or study. That work has already been accomplished. "Calendar reform has been exhaustively studied by the U.N. Secretariat, as shown in a report by the Secretary-General in 1947, which gives the entire history of the movement and the progress made." This 1947 report concluded that The World Calendar "is the plan which has received the most favorable comments." The Government of India adds: "Such a revision has been the subject of study and research on the part of experts, institutions and international organizations for many years. The consensus of opinion is that a new time system is necessary, adhering to the customary twelve months, but that it should be uniform—an invariable calendar, perpetually the same."

The exact procedure to be followed at Geneva has not yet been determined. The next step may be the preparation of an international convention or treaty, which can be submitted to all governments for ratification. "The

ideal of the whole world," says the Memorandum submitted by India, "is to have a logical and perpetual calendar to replace the present Gregorian: it is widely recognized that the calendar we now use is unsatisfactory for the economic, social, educational, scientific and other activities of man; modern progress demands the change."

At the July meeting in Geneva, ECOSOC will be in a position to ask the U.N. General Assembly (at its autumn session) to authorize the drafting of an international convention for submission to all nations. The new calendar, then, would go into effect at the earliest convenient date after ratification by a certain stated percentage of the countries to whom it has been presented.

The 18 countries which will have membership in the Economic and Social Council at the time of the July meeting are: Argentina, Australia, Belgium, China, Cuba, Czechoslovakia, Ecuador, Egypt, France, India, Norway, Pakistan, Turkey, United Kingdom, U.S.S.R., United States, Venezuela and Yugoslavia. Nearly half of these countries have, at some time in the past, supported calendar reform, and may therefore be expected to vote with India on the current proposal.



Dr. Juan Rivera Reyes, President of The World Calendar Association of Panama and one of the Panama delegates at the General Assembly of the United Nations, is shown in the Delegates' Lounge with James Avery Joyce, Honorary Secretary of the British Section of The World Calendar Association. Mr. Joyce, following his recent visit to the United States, received an honorary degree of Ph.D. from San Gabriel College in California, in recognition of his long and effective service in international relations.

Journal of

CALENDAR REFORM

DECEMBER 1953

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Charles D. Morris, Editor

Linda Halsted, Associate Editor

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AUSTRALIAN COMMITTEE MEETS

By John K. Lavett

Assistant General Manager, Commonwealth Life Assurances, Sydney, N. S. W.

ON December third the inaugural meeting of the new Australian Committee for The World Calendar was held in Sydney. Permanent officers were elected as follows: Chairman, Prof. A. D. Ross, Perth; Deputy Chairman, John K. Lavett, Sydney; Honorary Secretary-Treasurer, J. E. Marr, Sydney; Public Relations Officer, R. B. Prowse, Sydney.

The central committee includes representatives of all the Australian states—New South Wales, Queensland, South Australia, Tasmania, Victoria, Western Australia and Canberra. Each of these areas will now proceed to organize state committees; this procedure is already under way in New South Wales, South Australia and Western Australia. The Western Australia committee, for instance, includes: The Most Reverend Robert W. H. Moline, Archbishop of Perth; Sir Ross McDonald, former Attorney General; Dr. T. L. Robertson, Director of Education; G. K. Baron-Hay, Director of Agriculture; Prof. A. D. Ross, head of the Pan Indian Ocean Science Association; Prof. H. S. Spigl, Government Astronomer; D. W. Brisbane, head of the W. A. Newspapers; H. Hearn, president of the Citizens Rights Association; and B. Meecham, former president of the Chamber of Manufacturers.

The South Australia committee includes Sir Kerr Grant, president of the S. A. School of Mines and Industries; R. W. Parsons, vice-president of the Institute of Engineers; and H. E. Hooper, curator of the Science Museum at Adelaide. The New South Wales committee includes Prof. Harley Wood, Government Astronomer; E. W. Bell, former president of the Loss Assessors Institute; E. A. Laurence, senior member of Laurence & Laurence, solicitors; J. E. Marr, business systems consultant, and others.

In Canberra the central committee is represented by Prof. H. J. M. Abraham, head of the Commonwealth Observatory; in Queensland by Inigo Jones, research director of the Long Range Weather Forecasting Trust; in Tasmania by H. H. Cummins, chartered accountant; in Victoria by Prof. C. F. Walker, headmaster of the Melbourne Box Hill School.

The program of activities approved at the Sydney meeting included: (1) A survey of business, scientific and educational organizations to ascertain their views on calendar reform; (2) A campaign of publicity and information under the direction of Mr. Prowse, covering both press and radio; (3) An approach to the Federal Parliament, requesting the members to instruct their United Nations delegates to support the move being made by India for consideration of The World Calendar at the ECOSOC meeting in Geneva in July 1954; (4) Completion of the organization of state committees before the end of February.

INDIA ACTS AT THE U.N.

*Official Document Distributed by the United Nations
Economic and Social Council, under the
Heading "World Calendar Reform"*

THE Secretary-General circulates to the members of the Council the following communication received from the Permanent Representative of India to the United Nations:

New York, 28 October 1953

World Calendar Reform. The Permanent Representative of India to the United Nations presents his compliments to the Secretary-General of the United Nations and has the honour to state that the Government of India consider that the plan for the reform of the Gregorian Calendar (Annex I) proposed by the "World Calendar Association, Inc.," (630 Fifth Avenue, New York 20, N. Y.) is of great importance to the nations of the world. The purpose of the plan is to adopt for the whole world, from 1 January 1956, a new, fixed, uniform and invariable calendar, regulated astronomically according to the movement of the Earth around the Sun, and more regular, scientific and advantageous than the Gregorian Calendar. It is, therefore, requested that the plan for the reform of the calendar be included in the agenda for the eighteenth session of the Economic and Social Council to be held in 1954.

An explanatory memorandum on the subject is enclosed.

Memorandum on the question of World Calendar Reform

I

The ideal of the whole world is to have a logical and perpetual calendar to replace the present Gregorian Calendar, because it is widely recognized that the calendar we now use is unsatisfactory for the economic, social, educational, scientific and other activities of man. Modern progress demands the change.

Such a revision has been the subject of study and research on the part of experts, institutions and international organizations for many years. The consensus of opinion is that a new time system is necessary, adhering to the customary twelve months; but that it should be uniform; an invariable calendar, perpetually the same, more regular, scientific and advantageous from every point of view than the present Gregorian Calendar.

II

Our present Calendar is to all intents and purposes, the same as that introduced by Julius Caesar in 45 B.C. which, due to its irregularity and the time difference

caused by erroneous length of the year, was corrected and readjusted in 1582 by Pope Gregory XIII.

The divisions in the Gregorian Calendar of year, months, quarters and half-years are of unequal length, the months being from twenty-eight to thirty-one days. As a result, the number of days in the four quarters are, respectively, ninety (ninety-one in a leap year), ninety-one, ninety-two and ninety-two. As a result, again, the first half-year, contains two or three days less than the second. The number of weeks in the quarters and half-years is also unequal. There is consequently considerable confusion and uncertainty in economic dealings and in the preparation and analysis of statistics and accounts. The comparability of salaries, interest, insurance, pensions, leases and rent of one period of the year with another is greatly vitiated due to the unequal length of months which have from 24 to 27 weekdays plus Sundays.

Further, the calendar is not fixed and changes each year. The year, in fact, consists of fifty-two weeks plus one or two days. Thus, if the first day of the year is a Sunday, in the following year it is a Monday (or even a Tuesday in the case of a leap year). The exact reproduction of the calendar of any year only takes place once every twenty-eight years. Thus, the day of the month falls each year on a different day of the week from the one on which it fell the previous year.

Consequently, the dates of periodical events can never be fixed with precision. Such a date can in fact, only be determined in two ways: either by the day of the month (15th August for example) or by the day of the week in the month (the third Tuesday in October). If the day of the month is fixed for periodical events, this day may sometimes fall on a Sunday or general holiday. Each year the authorities have, therefore, to make a special decision, as for instance for the meeting of a tribunal, the convocation of Parliament, the dates of holidays, fairs, markets, the fixing of summer-time, etc. On the other hand, if a special day (the first Monday in the month, for example) is fixed for these events, other difficulties arise, as the date corresponding to this day varies continually from month to month and from

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WORLD CALENDAR REFORM

Communication dated 28 October from the Permanent Representative
of India to the United Nations to the Secretary-General

year to year. If the calendar were fixed, the dates of these events could be fixed once and for all. They would fall on the same dates as well as on the same days of the week.

The greatest drawback from a statistical and commercial point of view is that, since the various days of the week are not of the same value as regards volume of trade, and the years and the months do not from year to year include the same number of individual weekdays, there can be no genuine statistical comparison between one year and another, while the various subdivisions of the year itself—the half-years, quarters and months—are likewise incapable of comparison.

III

The proposed scheme of the World Calendar has overcome all the above drawbacks of the present Gregorian Calendar. It is scientific, uniform, stable and perpetual with but one unvarying calendar every year. It retains the present 12 months; thus the four quarters are always equal; each quarter has 3 months, 13 weeks, or 91 days, beginning on Sunday and ending on Saturday; each month contains an exact number of 26 working days *plus* Sundays; and days and dates always agree from year to year, and holidays are permanently fixed. The calendar remains identical from year to year. It offers harmony and order to all strata of society—government, finance, industry, labour, retail trade, administration of justice, homelife, transportation and education. All statistics compiled on the basis of a month, a quarter or a year are strictly comparable with one another.

IV

The 365th day of the year in the World Calendar is proposed to be an international holiday, without any weekday name, dedicated simultaneously in every

Statement issued by United Nations Press and Publications Bureau, under title "U.N. Reports on World Calendar," 26 November 1953:

India has asked that the possibility of shifting to a new World Calendar be taken up by the next session of the United Nations Economic and Social Council (ECOSOC).

The subject of calendar reform is probably as old as recorded history. However, today's arguments that it is time for a change are based on practical necessity, advocates of The World Calendar say. Past attempts were based on getting a better system for measuring time or on correcting errors that occurred when the sun's movement refused to conform to man's calculations. The Gregorian calendar in use today came into being for that reason. The calendar is very largely the one devised by Julius Caesar in 45 B.C. But in 1582, when the sun had outrun the calendar by ten days, Pope Gregory XIII cut out the lag and set up a new formula for leap years.

The main criticism of the present calendar is due to its variations. The first day of each new year begins on a different day of the week. The most obvious result is that come 31 December your calendar is as useful as . . . last year's calendar. Unless, of course, you are very thrifty and store it in the attic for 28 years which, according to the experts, is the next time the same day-date scheme will take place.

This variation means that each year periodical events must be proclaimed anew. Governments have to make special decisions for openings of parliaments, dates of holidays, the first day of summer, and so forth. In business and industry, similar procedures must be repeated. As just one example, transportation lines must re-schedule every year.

Another serious defect, according to partisans of a World Calendar, is that no three-

country of the world to the universal harmony and unity of mankind, thus knitting all races, creeds, peoples and nations into a closer bond of fellowship, creating world-wide citizenship in the "One World." The potentialities of "Worldsday" for strengthening and promoting international peace among all nations are of great value.

In leap years another similar international holiday is interposed between 30 June and 1 July.

V

The only feasible time for adopting a new calendar is when both the old and the new calendars coincide, enabling the changeover to be instituted with a minimum of disturbance. Both the outgoing Gregorian and the incoming World Calendars coincide on Sunday, 1 January 1956, giving the nations of the world two years' time to prepare for this significant and historical reform if adopted by the United Nations now.

VI

The subject of Calendar Reform has been exhaustively studied by the United Nations Secretariat as shown in a report by the Secretary-General in document E/465, dated 14 July 1947. It gives the entire history of the movement and the progress made up to that time. The report concludes that the proposal "is the plan which has received the most favourable comments."

month periods of the year are of the same length, although they are referred to as "quarters." Many statistics are based on quarterly periods, and this defect distorts comparisons.

If the months are uneven, it follows, of course, that the weeks overlap, making useless weekly sales comparisons and accounts. Weekly tallies are also thrown off when the first, 15th or 30th of the month are Sundays.

The Indian proposal is not new in United Nations annals. It reintroduces identical moves made earlier by some of the Latin-American countries, and is based on the calendar proposed by The World Calendar Association, Inc.

The League of Nations also tussled with the problem. Its contribution was to sift through the hundreds of calendars proposed. The League finally suggested The World Calendar to its Council as the one which could solve the greatest number of problems with the least inconvenience. The substitute calendar proposed keeps the usual 12 months but the four quarters are always equal, having 13 weeks, or 91 days, each beginning on a Sunday and ending on a Saturday. The first month of each quarter (January, April, July and October) would have 31 days and the remaining months would have 30 days. The 31st day of March, May and August would disappear while two days would be added to February and one to April.

Since this still leaves the year short of one day—it's 365th—The World Calendar plan is to make the day after 30 December an annual world holiday. The day would be known as Worldsday. It would be celebrated world-wide as an international holiday, according to the Indian plan, which describes it as dedicated "to the universal harmony and unity of mankind. . . ." In leap years a similar holiday would be observed between 30 June and 1 July.

In the words of the Indian note, The World Calendar "offers harmony and order to all strata of society. . . ." The note makes it clear as well why the U.N. should take up the matter now. The present Gregorian and the proposed World Calendar coincide on Sunday, 1 January 1956, so that the change could be made at that time with a minimum of fuss, and everybody would have two years for preparation, if it is adopted now.

BASIC FACTS REVIEWED

THIS background statement concerning international action on calendar reform has been prepared for the information of United Nations delegations by The World Calendar Association, International, which is in consultative relationship with the Economic and Social Council:

I. Essential Dates

Chief steps of recent international action toward calendar reform:

- 1910-14: International Chamber of Commerce adopts resolution approving calendar revision and urging Swiss Government to call international convention.
- 1914-18: First World War.
- 1919: International Astronomical Union urges calendar reform.
- 1921: International Chamber of Commerce asks for world conference to adopt perpetual calendar.
- 1922: Congress of International Astronomical Union recommends perpetual 12-month equal-quarter calendar.
- 1923: League of Nations appoints Committee of Enquiry.
- 1924: Vatican informs League of Nations there are no dogmatic objections to calendar reform.
- 1925: International Chamber of Commerce supports League of Nations activity.
- 1926: League of Nations Assembly formally accepts report of Committee of Enquiry.
- 1927: League of Nations invites governments to study report and set up national committees.
- 1928: Pan American Conference at Havana supports League of Nations activity.
- 1930: The World Calendar Association formed.
- 1931: League of Nations convenes International Conference on Calendar Reform; 44 nations represented; Conference recommends fixing of Easter and continued study of calendar reform.
- 1932: Various national governments approve League's recommendations.
- 1933: International Chamber of Commerce presses for specific League action.
- 1934-36: Various national governments and international organizations endorse 12-month equal-quarter plan (The World Calendar).
- 1936: International Labor Conference at Geneva calls for action by League of Nations Council.
- 1939-45: Second World War.
- 1947: United Nations Economic and Social Council considers motion by Peruvian delegation advocating universal adoption of The World Calendar, and instructs the Secretary-General to prepare documentation and submit draft resolution to member governments.
- 1948: Further replies bring total of states in favor of The World Calendar to 17.

- 1949: Panama places calendar reform on the United Nations provisional agenda, but General Committee postpones item for later consideration. (Vote of 4 against 4, with 4 abstentions and 2 absentees.)
- 1950-52: Various national governments considering steps for again bringing calendar reform before the United Nations.
- 1953: The World Calendar Association, International, admitted into consultative relationship with ECOSOC.
- 1953: Government of India requests UN Secretary-General to place the subject of calendar reform on the agenda of the 18th session of the Economic and Social Council, to be held in the summer of 1954.

II. Important Excerpts

from official and semi-official documents since the United Nations began:

1947: *Not a New Question*: This is not a new question. . . . All of the preparatory work has been done; the merits of the new calendar have been fairly discussed, and quite a series of governments have already accepted The World Calendar.—*Delegate of Norway seconding motion of Peruvian delegate.*

1947: *Note of Secretary-General*: The Economic and Social Council decided to adjourn the consideration of the proposal submitted by the representative of Peru to the next session; instructed the Secretariat to prepare whatever material was readily available for the consideration of the Council at its next session; and requested the Secretary-General to communicate to the member governments the proposed resolution of the representative of Peru. . . . It seems that of all the drafts studied on the international plane, the draft submitted to the Economic and Social Council by the delegation of Peru is the one which has received most favorable comments.—*Extract from Note prepared by UN Secretary-General, E/465/1947.*

1949: *Panama Initiative*: The ideal of the whole world is to have a logical and perpetual calendar to replace the present Gregorian calendar, because it is widely recognized that the calendar we now use is unsatisfactory for economic, social, educational, scientific and other activities of man. Modern progress demands the change . . . Of over 500 proposals submitted to the League of Nations, The World Calendar is the only survivor, having strong support in 41 nations of the world and being endorsed by outstanding business leaders, government authorities, international organizations and laymen.—*Memorandum presented to UN General Assembly in support of Panama proposal.*

1953: *Vatican Attitude*: With reference to the present attitude of the Vatican on the subject of The World Calendar, I have been asked to inform you that the Holy See now has the question under study and will make known its conclusions in the matter at the proper moment.—*Statement from Apostolic Delegate in Washington.*

1953: *India's Position*: How necessary such a reform has become for India may be further appreciated when we learn that even the Gregorian calendar is under careful examination by great international agencies because it has certain defects that are

handicaps in this modern streamlined age, and its revision is being seriously considered by countries which think this matter an urgent one for action by the United Nations.—*Dr. K. D. Malaviya, Deputy Prime Minister of India.*

1953: *India and Ecosoc*: Such a revision has been the subject of study and research on the part of experts, institutions and international organizations for many years. The consensus of opinion is that a new time system is necessary, adhering to the customary twelve months; but that it should be uniform—an invariable calendar, perpetually the same, more regular, scientific and advantageous from every point of view than the present Gregorian calendar. . . . The proposed scheme of The World Calendar has overcome the drawbacks of the present calendar. It is scientific, uniform, stable and perpetual, with but one unvarying calendar every year.—*Memorandum presented by the Government of India to UN Secretary-General, 28 October 1953.*

III. References

Some of the essential documentation leading up to the present position:

1834. ROME. Book by Abbé Marco Mastrofini (314 p.) suggests calendar be made perpetual by removing weekday designation from last day of year. Publication approved by ecclesiastical authorities.
1849. PARIS. Auguste Comte's *Calendrier Positiviste* employs extra day to make calendar perpetual. 35 p. Publication approved by ecclesiastical authorities.
1887. PARIS. Bulletin of Societe Astronomique de France. *Projet de Reforme du Calendrier*. Camille Flammarion. 63 p.
1900. EISENACH. World Council of Non-Roman Churches studies calendar revision.
1907. LONDON. Royal Astronomical Society. Alexander Philip, Secy: *Proposal for a Simplified Calendar*.
1910. LONDON. International Chamber of Commerce. *Resolution* adopted in favor of calendar reform.
1912. BOSTON. International Chamber of Commerce *resolution* asks Swiss Government to call international meeting of governments.
1920. WASHINGTON. *Report* of International Astronomical Union.
1921. PARIS. International Astronomical Union, Committee on Calendar Reform, Abbé Chauve-Bertrand, Secy: *La Question du Calendrier*. 188 p.
1922. WASHINGTON. Hearing before House Judiciary Committee on Calendar Reform.
1923. GENEVA. League of Nations. C.L.114. 6 p.
1924. GENEVA. League of Nations. Communication from Secretary General. C.L.50 . . . Minutes of first meeting of Committee of Enquiry. C.366.M.129. 10 p.
1925. GENEVA. League of Nations. Proceedings of Committee of Enquiry. C.235.M.88.
1926. GENEVA. League of Nations. Report of Committee of Enquiry. 163 p.
1927. GENEVA. League of Nations. Summary of Proposals for Calendar Reform. C.167.M.49. 58 p.
GENEVA. International Labor Office. *Report on Calendar Reform*.
1928. LONDON. Easter Act. Parliamentary Proceedings. 3 Aug.
WASHINGTON. Pan American Union: Report on Calendar Reform.
1929. GENEVA. League of Nations. Information Pamphlet on Calendar Reform.
WASHINGTON. Report of Special Committee on Calendar Reform. 27 p.
1931. GENEVA. Attitude of Vatican, Eastern Orthodox and Protestant Churches clarified. Statements dated 1912-1930 included in League of Nations documents. C.977.M.542.
GENEVA. League of Nations. Final Reports. C.785.M.380.

1932. GENEVA. Universal Christian Council, world organization of non-Roman churches. *Syllabus* inaugurating three-year study of calendar reform.
- LONDON. House of Lords debate on calendar reform. Parliamentary Proceedings.
1933. GENEVA. Report of Universal Christian Council.
- NEW YORK. American Bar Association. Report of Hearing on Calendar Reform.
- VIENNA. International Chamber of Commerce again considers subject.
- STOCKHOLM. Swedish Astronomical Society. Appeal by Arrhenius to support calendar reform.
- LONDON. Eastern Orthodox Church issues strong supporting statement.
1934. GENEVA. League of Nations reports. C.335.M.154.
- NEW YORK. Report of American Statistical Association.
- WASHINGTON. Hearings before House Committee on Foreign Affairs. Congressional Record.
- GENEVA. Supplementary Report. Universal Christian Council.
- FANO (Denmark). Report of Congress of Universal Christian Council. 27 p.
1935. NEW YORK. Chamber of Commerce. Report of Calendar Reform Committee.
- LONDON. Report of Calendar Committee of Royal Statistical Society.
- NEW YORK. Report of American Philosophical Society. 8 p.
1936. SANTIAGO (Chile). Labor Conference of American States. Report.
- GENEVA. International Labor Organization. League of Nations. C.L.42.
- LONDON. House of Lords Debate. Parliamentary Proceedings, 4 March.
- PHILADELPHIA. Report of calendar reform committee of Reformed Church. Published serially in six issues of *Intelligencer-Leader*.
- WASHINGTON. Central Statistical Board. Proceedings.
1937. GENEVA. League of Nations sends Chilean draft convention to governments. C.139.M.88.
1938. PRAGUE. Report from International Institute of Statistics, Dr. Hans Platzer.
1939. WASHINGTON. Reports from General Federation of Women's Clubs and National Education Association.
1942. NEW YORK. Recapitulation of League of Nations activities by Essy Key-Rasmussen. *Journal of Calendar Reform*, vol. 12.
1944. LONDON. House of Commons Debate. Parliamentary Proceedings. V.398.
- TORONTO. Report by Royal Astronomical Society of Canada.
1946. WASHINGTON. Bills presented in both houses of Congress. Congressional Record V.92. Nos. 138-139-153.
- MONTEVIDEO. Report published by Ministry of Foreign Affairs.
1947. LONDON. House of Lords debate. Parliamentary Proceedings. V.145. No. 37.
- WASHINGTON. Bills presented in both houses. Congressional Record. V.93.
- LAKE SUCCESS. Resolution presented in ECOSOC by Peru. Note from Secretary General. E/291. E/P.V.79. E/465.
1948. WASHINGTON. Kefauver Bill in U.S. Senate. Congressional Record.
1949. NEW YORK. Proceedings before UN General Assembly. A/BUR/SR.65.
1950. TORONTO. Report of Royal Canadian Institute.
- PARIS. French Standards Association (AFNOR) appoints Committee of Sixty. Preliminary Report by Abbé Chauve-Bertrand.
1951. WASHINGTON. Secretary of Labor endorses calendar reform. *Journal of Calendar Reform*. V.21.
- STOCKHOLM. Sixth Plenary Assembly of World Federation of UN Associations publishes reports from Argentina, Chile, China, Cuba, Germany, Netherlands, etc.
1952. OTTAWA. Canadian Labor reports. Also Canadian Manufacturers Association.
- LISBON. International Chamber of Commerce Report, referring calendar reform item to Executive Committee for action.
- PANAMA. *Un Calendario Perpetuo*. 84-page report on international progress by Dr. Juan Rivera Reyes, delegate to 1953 UN General Assembly.
- DELHI. Preliminary Syllabus by Prof. M. N. Saha for National Calendar Committee appointed by Prime Minister Nehru. 30 p.

WHERE THE NATIONS STAND

By Harold Watkins, London

(Abstracted from his forthcoming book, *Time Counts*)

IF one surveys the vast agglomeration of approval of the principle of calendar reform, or even the imposing array of expressed support for The World Calendar, it is hard to understand why so simple and beneficial a revision has not been carried out, after 30 years of intense study and activity. Probably the answer lies in the deep entrenchment of habit, and the fact that there is nothing essentially dramatic about the calendar. It is one of those ordinary everyday things, requiring no instant action. People are interested—but not enough.

A neat statement of just this was made 18 years ago by no less a personage than the man destined shortly afterwards to reach the highest peak of eminence as President of the United States of America. On 11 April 1935, Senator Harry S. Truman of Missouri, writing officially on the stationery of the U. S. Senate Committee on Appropriations, addressed the following letter to the editor of the *Journal of Calendar Reform*:

Dear Sir:

Replying to yours of the 8th instant, regarding the revised calendar, of course all of us are interested in the revision of the calendar as something to talk about as an academic matter, and personally I would like to see it go into effect. However, I have never given the matter serious thought or study because it would take a Pope Gregory or a Julius Caesar to put these changes into effect. Sincerely, HARRY S. TRUMAN.

It might well be said that if any man ever had the opportunity to change

academic interest into practical interest, that man was President Truman, but one can also admit that he had other things to attend to.

Yet Mr. Truman's view was, and probably still is, that nine out of ten of all intelligent people "would like to see it go into effect, but—" There is so often a *but*, usually meaning "I can't be bothered to take any personal action."

On the whole there can be no doubt that opinion favors reform. And overwhelmingly, where the subject has been studied, that reform takes the shape of The World Calendar project. If so far it has not been successful in achieving its object, The World Calendar Association has at least brought out clearly the desirability of action and has provided a very considerable framework. It has created or been largely responsible for the development of calendar reform organizations in no fewer than 36 other countries, all of which are working to promote adoption of The World Calendar by their own governments, or with the wider view of its world employment.

Some of these groups, as might be expected, are more active than others, but in the sum total their work represents a powerful movement. For the past six years most of them have had representatives at an annual meeting of The World Calendar Association International, an organization which exists as a non-profit body under a U. S. charter, with direct

and recognized consultative status at the United Nations. At its 1953 meeting there were represented affiliated organizations from:

Argentina	Great Britain	Peru
Australia	Greece	Philippines
Belgium	Japan	Salvador
Canada	Mexico	Spain
Cuba	Norway	Uruguay
France	Panama	United States

in addition to which reports were received from India, Eire, Netherlands, New Zealand and Sweden.

So it cannot be said that the nucleus, the foundation on which to build action, is anywhere wanting. The world advisory committee of the Association comprises more than 50 men and women, all eminent in their respective countries in scientific, social, religious or other fields.

Of the members of the United Nations Organization and other countries, seventeen were on record at the beginning of 1953 as having formally accepted the principle of The World Calendar and standing ready to put it into operation whenever there is hope of majority agreement. Since that time, India and Russia have indicated their support of the movement.

Russia is the first of the so-called "great powers" to offer active approval. The passive attitude of Great Britain, France and the United States has been explained by at least one observer in this fashion: "The bigger they are the harder to move—and it is all too easy to say, as the British Government has said in the past, that 'the time is not ripe.'"

Although it is clear that in many parts of the world there is approval, even government approval, and immense support from influential individuals and organizations, this is a reform which only inter-

national, not to say universal, action can bring about. Hence the key to success lies obviously in discussion within the United Nations Organization. It is here that the voice of Britain should be heard. With a lead from either Britain or the United States it is reasonable to expect that an overwhelming majority of nations would welcome the reform.

Of the five "veto powers," Russia and China are now on the side of reform. France is quite likely to be with them by the time the summer meeting of the U.N. Economic and Social Council assembles at Geneva in July, 1954. England will only join the movement if the London Government can get a positive mandate from business men and other groups. The United States delegation will be stand-offish (unless Congress instructs definite action), but will not oppose calendar reform.

Italy and Sweden are two countries which could be very helpful to the cause. At one time 20 years ago, Italy was considered a strong ally of calendar reform, but since that time her government has taken no stand, either pro or con. Sweden has shown no official interest in the movement, although eight years ago its former American Ambassador, the late Herman Lagercranz (the Andrew Carnegie of Sweden) was an active member of the World Advisory Committee of The World Calendar Association.

Russia's support of a revised calendar, if it develops at Geneva, will no doubt be helpful in drawing support from the so-called satellite countries. It is reasonable, of course, to believe that the country which has made the boldest calendar experiments in the last century will be favorably disposed towards adopting a new re-

vision so conspicuously beneficial from the viewpoint of industrial efficiency.

In March, 1947, at the Fourth Council of the U.N.'s ECOSOC, Russia was one of the three countries which moved for postponement of the question—the other two being France and the United States. Supporting Peru for immediate discussion in that instance were China and Norway, but in view of the pressure of urgent international affairs the Noes had it, and the members of the Council decided to adjourn the matter. At the same time they called for a dossier of the whole subject to be prepared for full-dress deliberation the next time opportunity should arise for its consideration.

This, of course, was designed to carry forward to the new United Nations the valiant work of the old League of Nations. Mr. Trygve Lie took it in hand, and by the time the question rose again—not before ECOSOC but before the General Committee two years later—he had produced a brief but valuable review of the whole subject, ably and judicially balanced, putting pros and cons with admirable impartiality. It led inevitably to a re-statement of The World Calendar case, and since it came from so eminently reliable and unprejudiced an examiner, it is worth quoting even at the cost of perhaps some little repetition. The pertinent section is that numbered "V," as follows: (U.N. Document E/465, 14 July, 1947).

V. Consequences and Problems Relating to the Adoption of The World Calendar:

The advantages usually emphasized by those in favor of the reform of the calendar are as follows:

Since The World Calendar is perpetual, all years would be identical except for the supplementary day in leap years, and it

therefore has all the advantages of a fixed calendar.

Its method of dividing the year into four equal and identical quarters makes it possible to use the quarter as a unit of subdivision, which is very convenient for certain aspects of everyday life.

With the existence of this calendar, statistical surveys, budgetary estimates, financial operations and plans for economic and social organizations may be drawn up in a much simpler fashion. Comparisons between any two periods may be drawn with simpler calculations and fixed formulae.

Furthermore, periodic events such as the convening of a Parliament can be permanently fixed as to both date and weekday.

The stability of the calendar also makes it possible to contemplate the stabilization of festivals which are at present movable.

It must be noted that this reform would, to a great extent, meet the need of improving the measurement of time from the economic and social point of view.

On the contrary, those opposed to the reform emphasize the following disadvantages among others: The World Calendar shares with all other calendar reforms the disadvantage that the alteration introduced will necessitate certain calculations in order to find equivalents between the new dates and the dates of the former system. Moreover, the fact that in The World Calendar Sunday does not always correspond to the real day of the Sabbath may cause practical difficulties for extremely orthodox worshippers of certain denominations. Nevertheless this disadvantage only affects a very small part of the population of the world.

On the other hand, the adoption of the draft resolution raises certain procedural and practical difficulties. From the international point of view, the reform cannot be adopted to any advantage if a certain number of governments do not introduce it into their legislatures. In this connection, the House of Representatives of the U.S. Congress has already received the draft of a bill to authorize the President of the United States to take the necessary measures for the adoption of The World Calendar. If a vote is taken upon this draft, it will facilitate the adoption of the reform throughout the world. [The bill was not passed.]

It seems that of all the calendars studied on the international plane, the draft sub-

mitted to ECOSOC by the Delegation of Peru is the one which has received the most favorable comments.

The draft submitted by Peru emphasizes that 1 January 1950 [now past: the new date is 1956 or 1961] is from many points of view the most suitable date for the transition from the Gregorian calendar to the new calendar, and that the adoption of The World Calendar makes it essential that legislative and administrative measures should be taken in time; the draft therefore recommends that ECOSOC instruct an *ad hoc* committee to study the proposed reform with a view to making definite proposals and pronouncing on this subject.

That was a very fair statement, and together with the other material of the Secretary-General's memorandum projected the matter clearly. It was available for discussion with more and readier facts at any future committee's finger-tips than had been available when Peru had raised the subject. Perhaps its postponement at that moment, though disappointing, had been all for the best. But in the following year, 1948, no delegation raised the question. However, it came up again the year after that.

It was on 27 May 1949, that the newspapers announced that Panama had proposed discussion of a World Calendar at the next session of the General Assembly. It appeared that at last the matter had arrived at the highest level. Now, it seemed—for there was no common-sense reason why it should not—now, it

seemed, the matter would at last be threshed out in the light of all the necessities and a conclusion reached.

But there is many a slip. Although an unofficial poll of the delegations showed about forty favorable votes, leaving only about fifteen uninstructed delegates, the Panama appeal was taken off the provisional agenda (which contained 72 items) by a tie vote of four to four in the steering committee. The U.S. delegate, Senator Warren Austin, was the committee-man responsible: he was supported by the Philippines, England and Denmark. Against him were the favorable votes of Canada, China, Chile and Venezuela. Abstaining were Russia, Poland, Pakistan and Brazil. Absent were France and Greece.

That was the situation this fall, when the Assembly again convened. It was toward the end of October that the delegation from India revived the situation by requesting for calendar reform a place on the agenda of the 1954 summer meeting of ECOSOC. This, then, is the next target, with the lines more clearly drawn than ever before.

If patience, persistence and hard work in a good cause count as they should, there will be substantial progress at Geneva toward the acceptance of The World Calendar.

NEWS BULLETINS

LONDON.—At a meeting of London Moslems on 20 November, an address on calendar reform was delivered by Dr. Abdul Majid, editor of the *Islamic Review*, and an explanation of the proposed World Calendar reform was supplied by Harold Watkins, author of the forthcoming book, *Time Counts*.

COLOGNE, Germany.—A new committee for calendar reform is being organized in West Germany, under the direction of Dr. F. Haerecke, General Secretary of the German Section of the International Chamber of Commerce. It will include leaders in trade, industry, communications, science and education, and will carry on the active interest which was so important in pre-war Germany.

THE STABILIZED WORLD CALENDAR

By Elisabeth Achelis

*(Abridged from an Address before the New Haven Astronomical Society,
at Yale University, 21 November 1953)*

FROM ancient times to the present, astronomers have been interested in the calendar. And naturally so. The calendar is built around a knowledge of the recurrent movements of the sun and the moon and the orderly procession of the seasons, days and years; and the acquirement of such knowledge rests in the hands of astronomers.

Two thousand years ago it was the astronomer Sosigenes who aided Caesar in his great calendar enterprise. When Pope Gregory XIII reviewed and corrected Caesar's system, he called upon the astronomer and physician Lilius and the mathematician Clavius to guide the work.

The Julian Day counting, used by astronomers, was the idea of J. C. Scaliger, a learned scientist and historian, who also had a part in the Gregorian reform. This Julian Day method is the simplest of calendars. It marks the days only, completely ignoring weeks, months and years. It is admirably suited for the needs of the astronomical observatory, but it would be utterly impossible and inadequate for general use.

Coming down to more recent times, it was in 1888 that Camille Flammarion launched a determined campaign for calendar revision. Within our own 20th Century many eminent astronomers have proved themselves stalwart advocates of an improved calendar; for example, such men as Alexander Philip, Dr. Arthur E. Kennelly, Dr. Wagner Schlesinger, Sir Harold Spencer Jones and Professor Meghnad Saha. Thus my appearance before the New Haven Astronomical Society follows a well-laid path which astronomers have blazed for centuries.

The outstanding defect of the present calendar is its ceaseless wandering. No one year is like the former or the following year. Days and dates constantly disagree. We are actually using a time-system that consists of 14 different kinds of years and 28 different types of months, and none of these follow each other in consecutive order. The haphazard assortment of months and years results in endless confusion and complication.

For example, today, Saturday 21 November 1953, will not occur again until 1959, 1964 and then 1970—in intervals of six, five and six years—while previous to this year the same coincidental date occurred in 1931, 1936 and 1942—intervals of five, six and eleven years.

We ask ourselves on what weekday will Christmas fall this year? When did it fall last year? On what weekday did the New Year come in 1952, 1953 and now in 1954? How many Thursdays and Fridays did January have this year as compared with last year? These are questions of some concern not only to the economic world, dependent upon accurate evaluation and comparison of one year with other years, but to all our scientific, educational and civil activities as well.

It is important for business to know how many Thursdays and Fridays January had

this year, as compared to what next year will have. Actually it had 27 weekdays in 1953, as compared to 26 weekdays in 1954. And a difference of one day is 4 per cent, a very important variation for purposes of comparison. The approaching New Year's Day will fall on Friday, and in all probability many business houses and stores will close on the Saturday following, giving a long week-end as compared to 1952. In '52 New Year's Day came on Tuesday and, as that year was a leap year, the following New Year's Day, in 1953, came on Thursday. Such are the annoying irregularities of our haphazard calendar.

Take as an example the average wage-earning income-taxpayer, who normally pays 52 times on his weekly salary. Yet occasionally he is obliged to pay 53 times—when the weekly payday of the final week happens to fall on the last day of the year.

Such are the injustices and inequalities which the present calendar thrusts upon everyone. Changeable days and dates bring about constantly fluctuating conditions wherein nothing is fixed or stable, forcing us to be continuously on the move. Our calendar keeps us guessing.

Added to this guessing are the irregularities of the quarter-years with their 90, 91 and 92 days. The result of these quarterly divergencies in statistical reporting is that accurate analysis becomes difficult if not impossible.

Actually the calendar is a smooth and subtle thief, stealing from us valuable time, requiring annual expense for the printing of new calendars, catalogues and schedules, and robbing us of some of our peace of mind.

Our days, too, are important. Yet weekdays seldom agree with month-dates. For instance, I can rarely celebrate the weekday of my birth. I am a Saturday child who, according to the rhyme, should "work hard for a living." Yet when can I observe it on Saturday? Assuredly there would be something very pleasant and accurate about having all our birthdays fall on the *day* as well as the date, where they belong.

Does the *day* on which the attack on Pearl Harbor occurred (*Sunday*) 7 December mean nothing to us? The Declaration of Independence was adopted on Thursday, 4 July, and the weekday when Woodrow Wilson declared war on Germany was *Good Friday*, 6 April. Yet these significant weekdays are not associated with their anniversary dates in our present variable calendar.

How did we ever attain this unsatisfactory and incomplete calendar, and why have we tolerated it for so long? It will be worth while, I think, to take time for a brief summary of what has led us to our present situation.

The "oldest known date in history," 4236 B.C. (6,190 years ago), marked the adoption of a solar calendar by the Egyptians. They were the direct ancestors of our current time-system. Their solar calendar was fixed, and was based on the heavenly body which gave them their regular seasonal periods. Previous to that time, various moon calendars had been in use but were unsatisfactory because they could not record the seasons.

It was the significant solar calendar, freed from all former moon associations, that proved of supreme importance to these ancient people, because it enabled them to foretell the annual movements of the River Nile. The Egyptians could thus with great precision calculate the four months of inundation, the four months of sowing and the four months of harvesting. The months were known by their numbers and each month was subdivided into periods of ten days each. Then to fill out the 365-day year, after twelve 30-day months the Egyptians added a festival period of five days, placed under the direct supervision of the priesthood.

Later the Egyptian scientists-priests discovered that the year was slightly longer than 365 days, and to provide for the additional fraction of a quarter-day, Ptolemy

III suggested a leap-year day every four years. Unfortunately, however, custom and habit of the people and certain prerogatives of the priesthood were too firmly entrenched. The wise suggestion of an extra quadrennial day, which Ptolemy had quaintly dedicated to the "Good-doing Gods," was rejected. So the Egyptian calendar continued to wander slowly through the seasons, so that a winter holiday would come in autumn, summer and spring before it returned to its natural season.

The next reform was that of Julius Caesar, who in conquering Egypt had learned of the solar calendar and recognized its superiority to the erratic system then in use by Romans. Julius invited the Greek-Egyptian astronomer, Sosigenes, to aid him, and the Julian calendar was adopted in 45 B.C. This is the calendar we use today.

Certainly we have come a long way from candles to electricity, Roman chariots to automobiles, galley ships to transatlantic liners and swift airplanes. Yet the calendar which guides our every action, is the same antiquated time-system.

You will note how strange the Julian calendar was in its peculiar subdivisions of months into calends, nones and ides—and in the different lengths of months—seven months of 31 days, four months of 30 days and one little month of 28 or 29 days. Among the Romans the last month, February, was given over to the "gods of the nether world" and as Caesar did not wish to disturb ancient customs, February continued to be a short month.

The great innovation of Caesar's reform was the new leap-year day, previously rejected by the Egyptians, which Caesar installed in the new calendar. This day was inserted every four years and was given to February. It is the same method we use today.

The ancient Romans were a superstitious people. To them the odd number was lucky, the even number unlucky. So it was natural that the Julian calendar had a greater number of odd months than even.

About a century before Caesar, the beginning of the year had been changed from the spring equinox to the first day of January—for political reasons, because on that day the newly elected Roman consuls assumed office. It seems a little ridiculous that the beginning of the year in our modern calendar should have its basis in an ancient annual political event, and that for this reason we ignore the natural beginning of the year at the spring equinox or the winter solstice.

Four centuries after Caesar—in 321 A.D.—Constantine the Great, first Christian ruler in the world, introduced into the Julian calendar the seven-day week, thereby banishing forevermore the fantastic ides, nones and calends. With the adoption of the seven-day week, Constantine also accepted the custom of the early Christians of observing the first day of the week as a weekly day of worship in commemoration of the Resurrection.

Constantine's contribution to the calendar was important. The seven-day week has proved convenient and beneficial to the physical and spiritual welfare of man. It has been noted that "Constantine succeeded in establishing a happy balance between the beginning and the closing of the week, by recognizing the importance of the Sunday *beginning* without disturbing the Saturday *closing* observed by the Jews."

Now we come to the Gregorian reform—and our present calendar. An energetic and determined Pope saw the need for adjusting the calendar to the regular seasonal occurrences from which it had strayed. The calendar had gone so far awry that the spring equinox was coming on 11 March instead of 25 March.

In the long interval between 45 B.C. and 1582 A.D., it had been discovered that the year was not exactly $365\frac{1}{4}$ days long, but slightly less. The actual length was 365 days, 5 hours, 48 minutes and 46 seconds. Thus too many leap-year days had been inserted. With the aid of scientists Gregory adjusted the spring date, not to the ancient equinoctial marker of 25 March, but to 21 March. He selected the latter date because in 325 A.D. the *first* Christian "assembly" had met at Nicea, and in that year the spring equinoctial date occurred on 21 March. In order to commemorate that significant Christian conference, the Pope put the spring equinox on that date, and it has been so observed ever since.

To anchor the equinox in its place, Gregory formulated a new leap-year rule. It is as follows: Leap-year comes every four years, except in centurial years (that is, years exactly divisible by 100). In centurial years the leap-year rule is dropped, except in century years divisible by 400. Thus 1600 was a leap year, and 2000 will be a leap year, but 1700, 1800 and 1900 were ordinary years.

Pope Gregory accomplished what he desired. The calendar was brought back in step with the seasons, and will remain so for about 3,300 years, when once again it will need a one-day adjustment, presumably by the simple elimination of a leap-day.

No attempt was made by Gregory to improve upon the internal arrangement of the calendar. He probably felt this desirable change would come along later in the natural course of events. So the irregular lengths of months, the unequal quarterly and half-year divisions, the wandering character of the weekdays, remained. It is now our task to complete the unfinished reform by a revision that will give the calendar the permanency, order and stability which is so much needed.

The League of Nations in its short span of 18 years undertook a careful and valuable study of the calendar. It gave consideration to more than 500 different proposals, out of which two principal plans emerged—the 13-month, and the 12-month equal-quarter. Finally it rejected the 13-month plan, and gave its endorsement and approval to The World Calendar. At the final conference on the subject by the Council of the League in 1937, only the Chilean proposal for The World Calendar was presented to member and non-member states. This recommendation received 14 acceptances and 6 negative votes; the remaining 25 nations replied that they were unprepared to make a decision. In the latter group were England and the United States.

The 13-month calendar had been rejected because it proved too radical in its many changes. Only 28 days in January stayed the same as in the Gregorian calendar; all the other 337 days would have to be re-classified as to months and dates. Moreover, by giving a preponderant emphasis to the week, the plan sacrificed the quarterly and half-yearly divisions of the year. The essential need of giving equal consideration to all the various time units was forfeited. In the League's opinion, the nullification of past records and the extra expense involved in an additional month were insurmountable handicaps.

From this brief survey of calendar backgrounds, one outstanding fact emerges. The calendar is man-made and has been sadly mishandled. It is man's fault that all kinds of personal elements, pagan superstitions, political influences and religious sectarianisms have entered into it. The scientific foundation on which the calendar should be based has too often been ignored and forgotten. The scientific factor must be restored and re-emphasized if modern reform is to accomplish the greatest good for all mankind, and meet the requirements for world growth and progress.

Calendar reformers, in seeking their goal, have returned to first principles. They have studied and taken into consideration the movements of sun, moon and the planet Earth, for upon these celestial movements the various time units are built.

It is the moon, with its four phases each of about seven days' duration, that gives us the series of seven days each, known as the week. It is the annual revolution of the planet

Earth around the sun that gives a year of 365-and-a-fraction days with the regular succession of the four seasons. It is the daily rotation of the Earth on its own axis that gives us the 24-hour day, subdivided into approximately 12 hours of light and 12 hours of dark. Only as man recognizes that these celestial bodies in their silent steady movements form the basis of the calendar, can he achieve the best time-system to meet all conditions. The calendar must be planned on a pattern free from irrelevant interference, group tradition, prejudice and religious sectarianism.

The great puzzle for man has been to adjust the series of seven-day weeks, of which there are 52 plus one or two days, into a year that is 365 days long in common years and 366 in quadrennial leap years. It was an unsolved problem for many centuries. Then a simple Italian priest, who was concerned as to how he could best help his people to obtain a permanent, orderly calendar without changing the scientific and familiar time units, found a way to meet the seemingly impossible situation.

Abbe Marco Mastrofina conceived the brilliant idea of considering the year as 364 days in length—a period in which the 12 months, four seasons and 52 weeks could fit perfectly, at the same time upholding the convenient divisions of quarter and half years. After obtaining this result, he proposed that the 365th day of the year be inserted at the close of every year, and in leap years the necessary 366th day in midyear at the close of the first half year. These days were to be placed between two weeks, and thus the familiar seven-day pattern was retained. Sunday was still the first day and Saturday the seventh day of the week. Upon these two new stabilizing days, considered as non-working world holidays, now rest the permanency and stability of the calendar.

Placing the annual Worldsdays at the end of the year is most appropriate. In its world-wide observance this holiday recognizes the spiritual unity of men, sparked a few days before by the Christmas spirit of good will. With such an inspired ending of the old year, the New Year opens with renewed hope and faith. Placing the quadrennial Leap-year Day at the close of the first half year gives to each of the half years their equal quota of 183 days and maintains the half-yearly balance.

The objective of modern calendar reform is to use the simplest and most convenient method by which the surplus fractions of a day, that occur in the solar year, can best be inserted. Sir John Herschel long ago suggested that "when they (the fractions) amount to a whole day, cast them into the integer account." This is the method proposed by Abbe Mastrofina, who considered the "integer" as an extra complete day, synchronizing and harmonizing the weeks, days and solar year.

Mastrofina's inspired idea has been compared to a familiar Chinese fable. . . . A farmer at his death left 11 sheep to his three sons, with instructions that the eldest should have one-half the number of sheep, the second son one-quarter, and the third son two-thirds of the remainder. This strange division greatly perplexed the family, until a wise mathematician showed them how to solve their problem. He told them to go to a neighbor and borrow a sheep. With this borrowed sheep, the sons now had 12 animals which they could distribute in accordance with the wish of their venerable father. The eldest son received one-half the number, or six sheep; the second son received one-quarter, or three sheep; the youngest received two-thirds of the remainder, or two sheep. When the borrowed animal had thus performed its duty, the sons returned it to its owner.

In reverse fashion, calendar reformers have solved the problem by *withholding* the 365th day, whereby the year has 364 days, a number easily divisible into equal quarter-years of 91 days each, and equal half-years of 182 days each. Every quarter has 91 days, 13 weeks or three months. With this satisfactory solution, the 365th day is returned to the calendar and placed at the end of the fourth quarter, as the new Worldsdays.

The outstanding merit of this orderly, scientific and perpetual plan is that it achieves a maximum of benefit with a minimum of change. In arrangement, the familiar 12 months are kept—with their lengths more evenly apportioned in a rhythmic series of 31, 30 and 30 days to each quarter-year. The first month of each quarter has 31 days, the other two have 30 days each. The quarter years always begin with Sunday and end with Saturday. Corresponding days and dates always agree. Perfect coordination is obtained among the various time units, resulting in accurate comparability from year to year. Every year

begins with Sunday, 1 January; holidays can be stabilized according to the desires of the various nations.

It is a most happy coincidence that The World Calendar begins every year, every week and every quarter-year on the first day of the week, Sunday, and closes every week and every quarter-year on the last day of the week, Saturday—supplementing them at the close of every year with the new world holiday, Worldsdays. It has been said that “as the Egyptians builded better than they knew when they gave to the world the *first* solar calendar, so our generation today is building better than it knows by giving to mankind the *first* stabilized calendar in which all the various time-units agree—days, weeks, months and quarter-years approximating the seasons.”

In these days of international disagreement and economic uncertainty there is an imperative need for increased order and unity in the world. The new calendar will help to fill this need.

There is one question which needs to be answered at this point. What progress is being made toward the actual enactment of calendar reform?

I am happy to inform you that the immediate future looks bright. In the United Nations the subject is under the able leadership of the delegation from India. Only a few days ago, this delegation filed formal papers placing calendar revision on the agenda of the next summer meeting of the Economic and Social Council. Favorable action at that time will bring the matter before the General Assembly two months later.

“The ideal of the whole world,” says the delegation from India, “is to have a logical and perpetual calendar to replace the present Gregorian system. . . . Modern progress demands the change. . . . The subject has been exhaustively studied and the report of the United Nations Secretary-General concludes that the [World Calendar] proposal is the plan which has received the most favorable comments.”

U. N. Radio Report

By PETER STURSBURG

(In Canadian Broadcasting News Roundup from the U. N., 17 November 1953)

THERE is a likelihood that the calendar may be changed in the next couple of years. And the change, the first since Pope Gregory corrected the calendar 400 years ago, will affect me personally. For my birthday happens to fall on 31 August, a day that will disappear.

Let me tell you about The World Calendar, which India is asking the UN Social and Economic Council to approve. It is described as a “perpetual calendar.” In other words, it makes month-dates and weekdays coincide so that any given month-date will fall on the same weekday every year. This is achieved by taking away the weekday name of the last day of the year and calling it Worldsdays. Thus 364 days are left, and 364 is exactly divisible by seven.

The present calendar is handicapped by a hodgepodge of folklore, forgotten cultures and personal vanities. The attitude of the India delegation at the UN is that the time has come to put it on a sound and scientific basis. Many other countries support the idea, including Canada. In fact, there is really no opposition in the international forum, although some delegations would like to postpone the matter until they can give it further consideration.

India is pressing for immediate action, so that the revised calendar can go into effect on 1 January 1956.

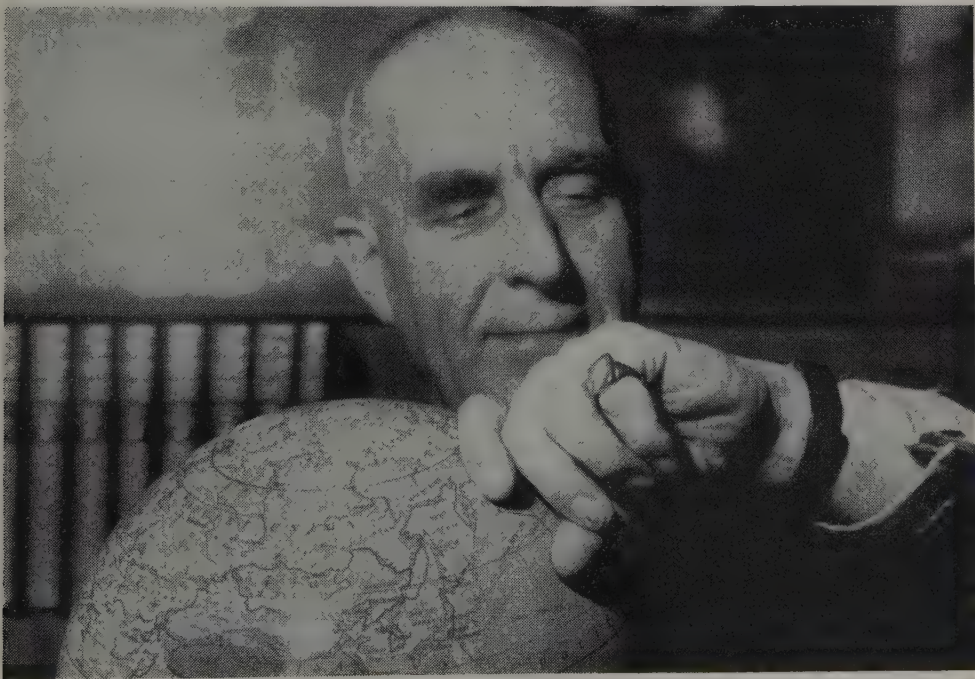
PROFILE OF ASTRONOMER ROYAL

By Mervyn Jones, London

THIS year, Sir Harold Spencer Jones celebrated the completion of twenty years as Astronomer Royal. "Celebrated" is perhaps an exaggeration, for Sir Harold regards this as a very moderate achievement; and for a man in the regular habit of thinking in light-years, a period of this sort is barely noticeable. Nor, indeed, is it any kind of record to be Astronomer Royal for twenty years. Since the post was created in 1675, it has had only nineteen occupants (Sir Harold being the twentieth). "We're a hardy race," he says with his slow smile. He will have

to stay at the Royal Observatory for another eight years to create any record for length of service; but nobody on his staff, and for that matter nobody who has met him, could have much doubt of his ability to do so.

A youngish 63 years old, Sir Harold has the big frame and broad shoulders, the combined power and lightness of movement, that you would associate with a man who has led an athletic life. It turns out that Jones is just naturally healthy; he plays no games, and his only form of exercise has always been walking.



N. Y. HERALD TRIBUNE PHOTO

When he starts to talk, he commands attention without effort. His style, in conversation as well as in the lecture room, or in writing, makes no concession to frills and fads; its single aim is clarity. Here is one of those increasingly rare men who take their time in considering the answer to a question; don't open their mouths until that answer is framed in the most effective possible terms; and see nothing wrong or affected in uttering a sentence of such grammatical correctness that it could be transferred to the printed page.

The Astronomer Royal writes and speaks, in fact, as a scientist—which does not mean scientific jargon. But when he speaks, his clarity of thought is assisted by two weapons on which the listener's attention is at once riveted. Very likely the Astronomer Royal himself is unaware of them. One is a pair of remarkable, deep-set eyes under heavy eyebrows. The other, his long and expressive hands, which he moves, gently and precisely, to illustrate his meaning. "The earth rotates"—and a strong, half-bent finger moves solemnly round—"but you see, it wobbles a bit"—and, just a fraction, it does wobble. The effect is to convey the impression that Sir Harold understands the earth and the planets and their odd, ill-regulated little ways as well as he understands the capacities of his own hands.

To achieve eminence in astronomy, more perhaps than in other sciences, demands a rare combination of qualities. There must be infinite patience and the capacity for silent, unhurried reflection; there must be quickness of decision sometimes, when a conjunction has to be observed that will not recur for a lifetime; there must be imagination of an almost

romantic type to grasp the immensities of outer space and to venture into new fields of investigation with no equipment other than the telescope and the human brain. Yet, as in all scientific work, there is also a need for hard-headed accuracy and attention to detail. For the Astronomer Royal, this last is especially pushed to the forefront, since the post carries official responsibilities. Sir Harold occasionally regrets that his position leaves him less time than he could wish for pure research.

The Astronomer Royal, in fact, has a dual loyalty: to the world of science, organized in the Royal Astronomical Society, and to the State. The appointment is made by the Prime Minister, and officially, by reason of a system which has remained unchanged since 1675, the Astronomer Royal is an employee of the Admiralty. For centuries the main purpose of "star-gazing" was to assist in navigation. Today, the Royal Observatory's first duty is to provide accurate time. It is a duty to Britain and, in view of the predominance of Greenwich Mean Time, a duty to the world.

Improved accuracy in time-telling, in point of fact, has been one of the main achievements of Jones' tenure of office (or should one say of his first twenty years?). He recalls that, when he first came to Greenwich, the most accurate instrument was the pendulum clock, and the closest measurement a tenth of a second. Now, the pendulum has been superseded by the quartz clock, and clocks are tested for error against a scale on which the large measurement is the millisecon—a thousandth of a second. Looking carefully at the resultant graph, Sir Harold can observe errors of a hundredth millisecon.

It is well, then, that Jones is firmly

grounded in mathematics; and the truth is that he entered astronomy through that branch of learning. Born in London and educated at the solid, middle-class Latymer School, he went on to an outstanding career at Cambridge, a first in mathematics, and appointment to the Isaac Newton Studentship in Physical Optics. The subject indicated that he was drawing close to astronomy, but he still had not decided where to specialize when the then Astronomer Royal, Sir Frank Dyson, invited him to join his staff as a leading assistant. There followed ten years at the Royal Observatory, then at Greenwich; ten more in charge of observatories in South Africa; and promotion, at a remarkably early age, to the supreme post of Astronomer Royal as Dyson's successor.

Before assuming this position Jones had worked and written on a wide variety of themes. He had investigated the movement of the Poles; determined, more exactly than ever before, the distance of the sun from the earth; while at Cape Town, discovered an interesting new star, Nova; and written a book on that ever-fascinating topic, "Life on Other Worlds." After becoming Astronomer Royal, he had to relegate speculations of this sort to the background of his activity and devote his main energies to the day-by-day measurement of time.

It was this work that aroused his interest, and more and more his enthusiasm, for the cause of calendar reform. It is manifestly absurd for the world to be marvellously accurate in the measurement of a minute and vague in the organization of months and years. One of Sir Harold's early investigations had related to the comparison of the sidereal and the

tropical year. He feels today that one of the principal ways in which he can be of service to nation and world—a way which would have earned the full approval of the men who instituted his post in 1675—is to press for the adoption of a calendar which makes full use of all modern knowledge on the subject of time.

Therefore, in recent years, Sir Harold has given the aid of his authority to The World Calendar Association. His lecture last year on calendar reform to the Royal Society of Arts was a fine send-off to the Association's work in Great Britain. The lecture has since been reprinted as a pamphlet and widely circulated.

An astronomer, with his special long view of time, easily reconciles himself to working for his successors; and Jones will be remembered not only for his own discoveries, but for the administrative achievement of supervising the move of the Royal Observatory from its ancient home, and the erection of powerful 98-inch telescopes at the new site sixty miles from London's fogs and mists. The move, begun in 1948, will not be finally completed until 1956. The search for a site, alone, took many anxious tests and inquiries. The old castle of Herstmonceux, however, is ideal from every point of view. The air, because of the level ground and the proximity of the sea, provides to a high degree what astronomers call "good seeing." The castle is isolated, but towns are not too far away, and the staff has already begun to transform life in the nearby village. A skillful reconstruction, using the framework of the fifteenth-century building, has provided offices and workrooms which are a restful delight, as well as pleasant residential quarters for the Jones family and

senior members of the staff. Finally—though this could hardly be called an official consideration—it is not far to Brighton's excellent theatre and Glyndebourne's famous opera.

For Sir Harold—and surely here he continues the tradition of the founders of the Royal Society and the Observatory—is no narrow specialist, but a man of all-round culture. He reads widely in sciences other than his own. His favorite recreations are music, the theatre, and foreign travel. When he takes a holiday, he likes to strike out off the tourist track,

and has formed a special fondness for Norway (the midnight sun has something to do with this choice, and this year he travelled round the North Cape in a cargo steamer). For a complete change in reading Sir Harold prefers biography and poetry; he is widely read in the English poets but professes not to understand the modern ones. His hobby is eminently suited for a man of his degree of taste, knowledge, and achievement; he speaks of it lovingly, almost shyly, moving those long fingers in a gesture that is half a caress. It is the collection of rare books.

MAGIC NUMBER IN STATISTICS

By Arthur Taft Chase, Island Creek, Mass.

AS a lifetime student of the "magic of numbers," I was interested in an article in the June *Journal*, written by a distinguished British statistician. He set forth a method of accurately apportioning annual expenditures over respective months of varying lengths, using the factor 52.142857, which he derived by dividing 365 (days in the year) by 7 (the days of the week).

The writer, S. J. Noel-Brown, apparently is unaware that his decimal, 142857, is known to mathematical *cognoscenti* as a "magic number." It has some remarkable characteristics. Set it down and add it to itself continuously seven times, and you will note that for six additions the resultant number duplicates the digits in the same order, though beginning each time with a different digit:

142857
142857
285714
142857
428571
142857
571428
142857
714285
142857
857142
142857
999999

The seventh addition of this "repetitive decimal" results in continuous nines. It will also be noted that the number 142857, although divisible by 3, has no 3—nor any multiple of 3—in its make-up.

I am not aware that there is any known relationship between the 365 and 7, and the repetitive decimal 142857. If there is any discussion of such a relationship in mathematical literature, I should like to know about it.

*By Sir Harold Spencer Jones, Astronomer Royal
An Address at the Opening of The World Calendar Exhibit,
American Museum-Hayden Planetarium, New York City, 4 December 1953*

The day that is used in civil life is the period in which the Earth makes one complete rotation relative to the Sun, giving the alternation of a period of darkness, from sunset to sunrise, and a period of light, from sunrise to sunset. Before the era



of clocks, each of these two periods was divided into 12 hours. These temporal hours, as they were called, varied in their lengths throughout the year, and, except at the equinoxes, the daytime hours differed in length from the nighttime hours. This system was the natural one for primitive people, long before there were clocks that could give any approach to reliable time-keeping; for the daytime hours were the working hours and so were the most important ones to the individual; it was convenient to divide them into 12. We see this natural division in the account of the Creation in the first chapter of Genesis: "God divided the light from the darkness. And God called the light Day, and the darkness he called Night. And the evening and the morning were the first day."

Astronomers use a different day, called the sidereal day, in which the Earth rotates through exactly 360° ; this day is the period of rotation relative to the stars. Because of the motion of the Earth round the Sun, the solar day is nearly four minutes longer. The solar day is, however, not constant in length because the distance of the Earth from the Sun is variable through the year, and because the axis of the Earth's rotation is not perpendicular to the plane of its motion round the Sun. For convenience in modern life we use a uniform time, in which every day is of equal length and equal to the average length of the true solar day. The difference between true solar time, which is given by a sundial, and mean solar time is familiar to everyone who possesses a sundial. But as recently as a century ago, when public distribution of time was still in its infancy, true solar time was in quite common use.

The revolution of the Moon round the Earth gives us the month. For calendar purposes it is the lunation or lunar month that is important: this is the period from new Moon to new Moon, in which the Moon goes through all its phases. But the length of the lunation can vary by about 13 hours, in consequence of the orbits of the Earth and Moon being elliptical and of the perturbations of these orbits. In early times, the occurrence of new Moon could not be predicted with any accuracy. The beginning of a new month was determined by the actual observation either of the reappearing crescent in the evening, as in Mesopotamia, or of the invisibility of the waning crescent in the morning, as in Egypt. The first or last visibility of the crescent depends, under clear conditions, however, on several variable factors, such as the orientation of the Moon's orbit relative to the ecliptic and the angular distance of the Moon north or south of the ecliptic. In the latitude of Babylon the crescent Moon may be seen under perfect conditions in the evening as early as 16 hours after new Moon or at other times not before 42 hours after.

The average length of the lunation is somewhat greater than $29\frac{1}{2}$ days, so that the month determined by observation of the new Moon normally had a length of either 29 or 30 days, these being called "hollow" and "full" months respectively. In primitive calendars either actual observations or some crude scheme was employed to determine the distribution of hollow and full months.

The year, which is determined by the revolution of the Earth round the Sun, can be defined in various ways. For the purposes of everyday life it is the recurrence of the seasons that is important. What we call the vernal equinox, which is usually taken as marking the beginning of spring, is the moment when the Sun crosses the equator in the course of its northward passage along the ecliptic. The year of the seasons, known as the tropical year, is the interval of time between two successive passages of the Sun northwards across the equator. The year can be defined in a different way as the period of revolution of the Earth round the Sun, relative to the fixed stars; this year is known as the sidereal year and is about 20 minutes longer than the tropical year, in consequence of the retrograde motion of the vernal equinox along the ecliptic.

The difference between the lengths of the two years was found with fair accuracy by the Greek astronomer Hipparchus about 130 B.C. Let us consider for a moment how it was possible at that time to discover this small difference in the lengths of the two years. From very early times it was known that different constellations were visible at

different seasons of the year: this is, of course, a consequence of the revolution of the Earth round the Sun. Amongst the Babylonians and Egyptians it was customary to observe which bright stars were visible in the morning twilight near the eastern horizon. The rising of any given star occurs earlier day by day; so a day would come when for the first time a bright star, such as Sirius, was first seen in the morning twilight. This is called its *heliacal rising*. The early astronomers observed the heliacal risings of bright stars for the purpose of determining the passage of the Sun amongst the stars. The interval between two successive heliacal risings of the same star is the sidereal year. From records of observations of heliacal risings separated by many years, the length of the sidereal year was determined with considerable accuracy.

The succession of the seasons could be marked out by the use of a stick stuck vertically into the ground, called a gnomon. At midsummer the Sun is at its farthest north in the sky, and it then rises at its farthest to the north of east and sets at its farthest to the north of west. The summer solstice therefore occurs when the shadow of the gnomon at sunrise and sunset reaches its extreme northerly positions; the winter solstice occurs when the shadow reaches its extreme southerly positions. At the equinoxes the shadow, both at rising and at setting, is exactly in the east-west direction. By records of when these positions were reached, extended over many years, the length of the tropical year was determined.

The length of the tropical year exceeds 12 lunations by about 11 days, and this was a serious complication in the days when the beginning of the month had to be fixed by observation of the young crescent Moon, and before the length of the tropical year was known with reasonable accuracy. Many religious festivals were associated with the phases of the Moon; we have a survival of this fact in the way that Easter is fixed today. For the early civilizations, which were strongly agricultural in character, it was important to know the seasons of the year. Various meteorological phenomena could be used as a rough guide, such as the alternation of warm summers and cold winters in northern latitudes, or of a dry season and a rainy season in lower latitudes, or as in Egypt the annual flooding of the cultivable land by the rising of the river Nile. But all such natural phenomena are too irregular in their occurrence to serve as reliable guides; an abnormal spell of weather might result in sowing being unduly delayed, with the risk of crops not ripening in due season. It was thus natural to try to associate the months in some definite manner with the seasons.

It must have been ascertained at quite an early date that the year was longer than 12 lunations. If, as was probably done in early times, it was taken at equal to 12 lunations, the error would have accumulated so rapidly that the months would have been quite out of phase with the seasons after the lapse of a few years. This accumulated error could be corrected by inserting from time to time a thirteenth month in the year, thereby securing that the seasons were brought to approximately the right time of the year. But in early times there was no authority responsible for the calendar and so there could be no common agreement when the extra month was to be added. Gradually, with the emergence of a priestly caste, the regulation of the calendar became one of its functions, doubtless because they had the responsibility for fixing the days for the observance of the various religious festivals.

In Babylon, for instance, there was the hereditary priestly caste of the Chaldeans, by whom astrology was first brought to a well-developed system. Along with its cult there went the study of astronomy; for the recording of their observations and for facilitating their calculations, the Chaldeans used a fixed year of 365 days. But the basis of the civil calendar was purely lunar, the beginning of the month being fixed by observation of the invisibility of the lunar crescent, the day correspondingly beginning at sunrise. The year was kept approximately in phase with the seasons by inserting a thirteenth month from time to time, though the insertions were made at irregular intervals, sometimes as short as six months and sometimes as long as six years. But in the year 383 B.C. a regular system of intercalation was introduced by Kidinnu, based on the close equality between 19 tropical years and 235 lunations. This 19-year cycle is known as the Metonic cycle, because it was announced by Meton at Athens in 432 B.C., though it is probable

that it was discovered independently and at an earlier date by the Chaldeans, who kept long and careful records of lunar phases and eclipses. The intercalary months were inserted at fixed places in the cycle, the beginning of each month continuing to be determined by observation. The Babylonian calendar, throughout its subsequent existence, continued to be based on this cycle of intercalations. It is of interest to note that this cycle, together with the values assigned by Kidinnu for the lengths of the lunation and of the tropical year, forms the basis of the present Jewish calendar.

The calendar system that was used in Egypt was more complicated. For religious purposes a calendar that was purely lunar was employed, each month commencing, as in Babylon, on the day when the crescent of the old Moon was no longer visible in the eastern sky before sunrise. But it was found inconvenient for economic life to use months whose lengths were not constant and which could not be foreseen for even a relatively short interval of time. Civil months of a fixed length of 30 days were therefore used for business purposes, together with a year of 12 months and 360 days which bore no relation to the seasons. The agricultural life of the community depended upon the annual flooding of the Nile. Records of flood levels were kept, and before long it was found that though the intervals between successive inundations were very variable, the calendar of 12 civil months failed to record correctly their sequence, and that 5 additional days required to be added to the civil year to keep it in step with the all-important Nile floods; the average length of the interval between successive heliacal risings of Sirius was also found to be very close to 365 days. A fixed calendar with a year of 365 days was accordingly adopted. The year was divided into three seasons, each of four months of 30 days, Flood Time, Seed Time, and Harvest Time. The five remaining days were intercalary and were placed before the first month of the first season, which was called Thoth, equivalent to Seth or Sothis, the Egyptian name for Sirius, the brightest star, whose heliacal rising in June foreshadowed the flooding of the Nile. The lunar calendar continued in use for religious purposes, a thirteenth month being intercalated at intervals of two or three years to keep it in phase with the seasons. The three calendars, the civil or business calendar of 360 days, the fixed calendar of 365 days, and the lunar calendar, were used concurrently.

The Egyptian fixed calendar, with a year of 365 days, was introduced early in the third millennium B.C. and continued in use until the introduction of the Alexandrian calendar, probably in the year 26 B.C. It is of great importance in chronology because it was the only calendar, until the Julian reform of the Roman calendar in 46 B.C., in which the lengths of each month and of each year were fixed by invariable rules and were not left to be varied at the whim of officials.

Because the adopted length of the civil year was too short by about $\frac{1}{4}$ day, the fixed civil calendar and the lunar calendar based on observation gradually drifted out of phase with each other. The shift in the seasons was too slow to be apparent in the course of a lifetime and so no great inconvenience was felt on this account. The civil calendar had proved so convenient and had become so well established that there was no question of forcing it back into agreement with the lunar calendar.

A different solution of the calendar problem was evolved in Greece. In the early Greek calendar the beginning of each month was determined by the first appearance of the crescent Moon in the evening sky. Observations of the heliacal risings of bright stars were used to keep the calendar in phase with the seasons, the adjustment being made by adding a thirteenth month from time to time. Each local community had its own calendar; there was no common agreement about the beginning of the year, or about which years were to have the additional month or even about where in the year this month was to be inserted. At some later epoch the fixing of the beginning of the month by the Moon even fell into abeyance; the public authorities decided the beginning of each month and its length, and the manipulation of the calendar became a public scandal. It was held up to ridicule by Aristophanes in *The Clouds*, acted in 432 B.C.

With the development of civic life and of culture, the system of movable months and years tied to the phases of the Moon became increasingly inconvenient and a growing need was felt for a calendar in which the months and years were not dependent

on observation. The search began for a cycle that should contain as nearly as possible an exact number of years and months. We can pass over the first crude attempts to devise such a cycle, which were all superseded by the 19-year cycle introduced by Meton in 432 B.C. This cycle was essentially the same as the Babylonian cycle of Kidinnu in which 19 years (whose true length is 6939.60 days) was equated to 235 lunations (whose true length is 6939.69 days) and to 6940 days. There was an essential and important difference, however. Whereas in Babylon the beginning of each month was fixed by observation, in Greece the beginning and the length of each month were fixed by definite rules. Each month contained either 29 or 30 days. Some years contained six months of each of these lengths, giving a year of 354 days; others contained seven months of 30 days and five months of 29 days, giving a year of 355 days. In seven of the 19 years of the cycle a thirteenth month was intercalated after the sixth month, these years having a length of 384 days. Thus a calendar was provided which did not depend upon observation of the lunar crescent, but in which the beginning of each month fell close to new Moon (because the average length of the month was so nearly equal to the true length of the lunation); at the same time the seasons kept approximately their correct place in the year and did not drift through it.

The cycle of Meton was slightly modified by Callippus after it had been in use for about a century, in order to improve its accuracy. Callippus combined four of the 19-year cycles into a 76-year cycle and changed one month of 30 days to 29 days, so shortening the 76 years of the cycle by one day. This cycle thus contained 940 lunations and 27,759 days; the mean length of the year was thereby brought exactly to $365\frac{1}{4}$ days, the value obtained earlier both in Egypt and Babylon. The modification at the same time brought the average length of the month into still closer agreement with the true length of the lunation.

We have not so far made any reference to the week of seven days, which is a prominent feature of our present calendar. The week is not related to any natural interval of time and did not form a part of most of the early calendars. The Egyptians divided the 30-day month of their civil calendar into three 10-day periods or decans; there were 36 decans in a year, to each of which there was a corresponding deity. In the Greek calendar the days were numbered through the month from its beginning, partly to indicate those days which the superstitious had come to regard as lucky or unlucky and partly to ensure that the festival days should not be overlooked in spells of cloudy weather, for most of the Greek festivals were celebrated at definite phases of the Moon.

The seven-day week was introduced into Palestine from the Assyrians; from the Jews it was taken over by the Christians. It must have been familiar to the Egyptians through the Jews from early times, for the seventh day was observed as a day of rest by the Israelites throughout the period of their bondage in Egypt. But there is no evidence that the seven-day week was ever in common use in the civil life of Egypt. The first reference to its use in Egypt was by Dio Cassius in the 3d century A.D. The names for the days of the week which have been adopted throughout Western Europe are based on the names of the seven known "planets" or their associated divinities and are of astrological origin. This system of naming originated in Egypt, where there was a great development of astrology at about the beginning of the Christian era. The astrological belief was that each hour of the day was governed by a different planet, the succession of the planets being in the order of their supposed distance from the Earth, *viz.* Saturn, Jupiter, Mars, the Sun, Venus, Mercury, the Moon. The planet which governed the first hour of the day was called its Regent. If then we start with the day whose regent is Saturn, it is readily seen that the regents of the following days are the Sun, Moon, Mars, Mercury, Jupiter, Venus in that order, from which the names of the days of the week are derived. In the Teutonic languages, the names of their divinities, Tiu, Woden, Thor and Freya are used instead of their Roman counterparts, Mars, Mercury, Jupiter and Venus.

The seven-day week has always been a feature of the Jewish calendar. The Mosaic commandment that no work was to be done on the seventh day is tied up with the story of the creation in six days, with the seventh day as a day of rest. The ancient Jewish calendar was purely lunar, the month beginning with the first visibility of the crescent

Moon in the evening sky: the words of the Psalmist: "He appointed the moon for seasons" are an indication of the lunar origin. The Mosaic law enacted that the month Abib, in which the Israelites came out of Egypt, was to be observed as the first month of the year. It was in this month that the feast of Passover was to be celebrated and that green ears of corn were to be brought to the priests as the first fruits of the harvest. To keep the first month at the correct position of the year, a thirteenth month had sometimes to be intercalated. This was done by order of the priests when it appeared, towards the end of the twelfth month, that the corn would not be ready to offer as a sacrifice in the following month. In such a rough-and-ready but practical way the year's beginning was pegged.

After the destruction of Jerusalem by Titus and the dispersion of the Jews, the practice of fixing the beginning of each month by observation was abandoned, and a calendar in which the beginning and length of each month was determined by fixed rules was introduced in the year 358 A.D. This calendar, as already mentioned, is based on the 19-year cycle introduced into Babylon by Kidinnu. There are complicated rules to prevent various festivals and solemn days from falling on incompatible days, and the intercalated thirteenth month is inserted in such a way that Passover is kept at its proper season, which is the full Moon after the vernal equinox. Because of these special rules, an ordinary year may have 353, 354 or 355 days, while an embolismic or 13-month year may have 383, 384 or 385 days. The year is reckoned from the date of creation, assumed to be 7 October 3761 B.C. In this era the Jewish year 5714 began 10 September 1953.

We now have to consider the Roman calendar, which is of special interest because the calendar now in use throughout the whole of the civilized world is based upon it. Its origins are lost in obscurity, but it is reasonably certain that the months were lunar. It is believed that the year originally contained 10 months, and that two additional months were added by Numa about 700 B.C. March was originally the first month of the year, as is evidenced from the names Quintilis, Sextilis, September, October, November and December for the 5th to the 10th months. The two months added by Numa were January, which now began the year and was named after the god Janus, who faced both ways, and February. The numbers of days in the months were also changed; January, April, June, Sextilis, September, November and December were given 29 days; March, May, Quintilis and October were given 31 days, while February had 28. The total number of days in the year was thus 355, which suggests a lunar origin. To keep the year in correct relation to the seasons an additional month, which normally alternated between 27 and 28 days, was intercalated after 23 February, when it was considered necessary.

In later historical times the last five days of February were omitted when the extra month was inserted, so that the actual number of additional days was consequently either 22 or 23. The intercalary month was normally inserted in alternate years, so that four successive years would have a sequence of 355, 377, 355, 378 days, giving an average length of the year of $366\frac{1}{4}$ days, about one day too long.

The seven-day week was not used by the Romans, who had a peculiar system of enumerating the days of the month. They were counted backwards from three fixed points or days in the month, called the Kalends, Nones, and Ides. The Kalends were the 1st of each month; the Nones and the Ides were the 5th and 13th of the month respectively, except for the 31-day months, when they were the 7th and 15th. Thus the day following the Ides was expressed as so many days before the Kalends of the next month.

The College of Pontiffs was the body responsible for the regulation of the calendar, but their authority was often not used honestly, the calendar being manipulated for personal or political ends. The months were in consequence allowed to drift from their proper seasons, so that the celebration of various festivals came at the wrong time. By 47 B.C. the month of January, which should have followed the winter solstice, came at the season of the year that should have been occupied by October.

Julius Caesar, who was then Pontifex Maximus, accordingly decided upon a radical reform of the calendar and called in the astronomer Sosigenes of Alexandria for advice. The months were first brought back to their correct seasons by giving the year corresponding to 46 B.C. a normal intercalation of 23 days and then inserting two further

months, amounting together to 67 days, between November and December. This year in consequence contained 445 days in all, and is known as the Year of Confusion.

On the advice of Sosigenes, the mean length of the year was taken as $365\frac{1}{4}$ days. The length of the normal year was fixed at 365 days, and the device was adopted of inserting every fourth year an additional day, in order to give the required mean length of $365\frac{1}{4}$ days. This extra day was to be the sixth day before the Kalends of March (on which occurred the feast of Terminalia) so giving February 29 days. It thus became known as *ante diem bis sextum Kalendas Martias*, or simply *bissexturn*, whence leap years are known as bissextile. In the new calendar the months of March, May, Quintilis (July) and October, which already had 31 days, remained unaltered in length. January, Sextilis (August) and December were increased in length from 29 to 31 days; their Nones and Ides remained on the 5th and 13th days respectively, the days that were added being placed at the end of the month, so that the religious festivals connected with the Nones and Ides should not be changed. The name of Quintilis was altered to July (Julius) in honor of Julius Caesar. The lengths of the months were fixed at the present durations, which have never since been altered.

By this reform the seasons were expected to retain their places in the calendar without change. No attempt was made to relate the months to the phases of the Moon. The calendar was thus for the first time made purely solar. When we recall the many diverse efforts that had been made in previous centuries to keep the months in phase with the Moon and at the same time the year in phase with the seasons, the simplicity and the convenience of the Julian reform can be realized.

Simple though the directions for the intercalation of the extra day were, they were misunderstood by the Pontiffs, who proceeded to add one day every third year, so that the year 8 B.C., in which the error was discovered, began three days too late. Augustus Caesar directed that it should be corrected by suspending further intercalation until the year A.D. 8. The name of the month Sextilis was changed to August, in honor of Augustus, that being the month in which his most spectacular triumphs had occurred.

The dates of events in Roman history are usually indicated by reference to the supposed date of the foundation of Rome and denoted by A.U.C., an abbreviation of *anno urbis conditae*, the accepted date for the beginning of this era being 753 B.C. The Christian era, which we now use, was introduced by the Scythian monk, Dionysius Exiguus, about A.D. 530. He based the date of the Incarnation on a widespread tradition that Christ was born in the 28th year of the reign of Augustus, and he assumed that the reign of Augustus began in 727 A.U.C., which is now known to be incorrect. This era was adopted by Bede and from him by western Christendom generally.

The mean length of the year of the Julian calendar is too long by 11 minutes 14 seconds. This error, small though it is, caused the seasons to drift gradually backwards in the calendar, at a rate of one day in 128 years. The error first became noticeable in connection with the date of Easter. Tables for deriving the date of Easter in any year had been framed by the Council of Nice in A.D. 325 on the assumption that the spring equinox was on 21 March. As the centuries passed, the calendar date of the vernal equinox fell progressively earlier, and there was doubt in consequence as to the correct date for the celebration of Easter. The Council of Trent, which assembled in 1545, authorized the Pope to take the matter in hand. The various schemes that had been proposed for correcting the error were considered by Gregory XIII, on becoming Pope in 1572, with the result that a plan, which had been proposed by Aloysius Lilius, a Neapolitan physician, was adopted.

The revised calendar was instituted by a papal bull published in 1582. It was ordained that the day after 4 October 1582 should be designated 15 October, in order to restore the vernal equinox to the date assigned by the Council of Nice. In addition, the intercalary day was to be omitted in those centurial years that were not divisible by 400. There would consequently be 97 leap years in 400 years, the average length of the calendar year being reduced in length by 10 minutes 48 seconds through the omission of 3 leap years in the 400 years. A more exact correspondence between the calendar and the tropical years was thus obtained. It may be remarked that a still closer agreement

could be secured by not counting as leap years those years that are divisible by 4000. The average length of the calendar year would then agree with its true value within 4 seconds.

For fixing the date of Easter, new rules were incorporated into the Gregorian reform which imply a mean length of the lunation that agrees with the correct value within one-tenth of a second. The date of Easter is fixed by reference to the occurrence of the first full Moon after the vernal equinox, but it is the tabular full Moon determined by these rules and not the true full Moon that is involved. It can occasionally happen that the tabular full Moon occurs just before the vernal equinox and the true full Moon just after, or conversely. Many people are then puzzled by an apparent violation of the rule for fixing the date of Easter, not realizing that the rule is not concerned with the actual Moon.

The Gregorian calendar was at once adopted by many of the Catholic states of Europe, and by the others during the next few years. Its adoption by the Protestant countries was long delayed. The German and Dutch Protestant states and Denmark adopted it in 1700, Great Britain and the British dominions in 1752, Sweden in 1753, Japan in 1873, China and Albania in 1912, Bulgaria in 1916, Soviet Russia in 1918, Roumania and Greece in 1924, Turkey in 1927. The Greek Orthodox Church has not, however, adopted the rules for Easter.

When the Gregorian calendar was introduced into Great Britain in 1752, the official date of the commencement of the new year in England was changed from 25 March to 1 January, which date had already been adopted in Scotland in 1600 by a Decree of the Privy Council. English dates between 1 January and 25 March before 1752 are commonly given with both of the alternative years.

And so we have arrived at our present calendar. The calendar year must contain an exact number of days: by the simple device of adding one extra day in years that are determined by definite rules, the mean length of the calendar year is brought into close agreement with the true length of the tropical year, so that the calendar year keeps in phase with the seasons. The year is divided into 12 months, which are a survival from the early days when the beginning of each month was determined by the new Moon, though the months now bear no relationship to the lunar phases. The seven-day week, which was not an element in most early calendars, has been taken over from the Jewish calendar, because the custom of the early Christians of observing the first day of the week as a non-working day and a day for worship has proved to be of practical convenience.

The review that I have given of some (though by no means all) of the earlier attempts at providing a satisfactory and convenient calendar has illustrated the many changes that the calendar has gone through in the course of its evolution. Should we now sit back and say that we have a perfect calendar, to which no further improvements are possible, or that, even if some imperfections remain, we should be satisfied with what we have and not attempt any further improvement?

That there are imperfections nobody can deny. There is no logic in the way the days are divided amongst the twelve months of the year. This feature of our present calendar was taken over without alteration from the Roman calendar. How many of my audience, I wonder, can say at once how many days there are in any particular month that I might name, and how many, on the other hand, could give an answer only after repeating the doggerel, "Thirty days hath September"?

The four quarters of the year are unequal in length, having 90, 91, 92 and 92

days respectively in normal years, with the consequence that the first half of the year has 181 days, the second half 184 days. That is not a very convenient division for the comparison of business or economic statistics. If we exclude Sundays as non-working days, a month may contain 24, 25, 26 or 27 working days, which complicates comparison between monthly statistics.

Other inconveniences are the result of the year not containing an exact number of weeks. Some months have four Sundays, others have five: but the months that have five are not the same year by year. The day of the week on which the year begins changes from year to year, so that we do not know which day of the week corresponds to any date of the year without reference to a calendar. The first day of each month is a wandering event. Some holidays, such as Independence Day and Christmas Day, may fall on any day of the week: they may come at the week-end or in the middle of the week. Thanksgiving Day, on the other hand, is fixed as the fourth Thursday in November, irrespective of the date, which is a much more convenient and logical arrangement.

With our present system we have to use a new calendar and a new diary each year. In the last few months of the year before the new diaries are available we are always in some trouble with engagements for next year, because corresponding days and dates will be different from this year. We may be so conservative that we take the view that what was good enough for our fathers, our grandfathers, and our great grandfathers is good enough for us: or perhaps I should say rather that we may take the view that what they put up with we can put up with. But even so, if we are honest we must admit that our present calendar is not perfect and could be improved.

Many schemes for the reform of the calendar—some 150 or so I believe—were considered by the League of Nations. After careful examination and long discussion, these were reduced to the two which offered the greatest advantages. Both of these had one feature in common: the year was divided into 52 complete weeks, with one extra day in normal years and two extra days in leap years, which were taken out of the seven-day week. The 52 weeks were divided in one scheme into thirteen months, each consisting of 28 days, and in the other scheme into four quarters, each containing one month of 31 days and two months of 30 days. The first scheme has the great advantage that every month is identical and contains precisely four weeks—a neat and tidy arrangement. But we have to weigh against that the great disadvantage that the year does not divide into quarters conveniently; quarterly payments are inconvenient, quarterly statistics are not obtainable from monthly statistics, and so on.

This scheme has consequently not received the wide support that has been given to the alternative scheme, known as The World Calendar. In this calendar every quarter is exactly alike, beginning on a Sunday and ending on a Saturday. The first month of each quarter, which has 31 days, has five Sundays and 26 weekdays; the other two months, which begin on Wednesday and Friday respectively, each contain four Sundays and 26 weekdays. Any given date occurs on the same day of the week year by year. Christmas Day will always fall on a Monday, which is more convenient than a day in the middle of the week. Thanksgiving Day will always be 23 November. Independence Day will always be on a Wednesday. We shall each of us always celebrate our birthday not only on the day of the month on which we were born but also on the day of the week on which we were born. Anybody can in a few minutes learn this calendar—which is a perpetual calendar, holding for every year.

But what about the one extra day in ordinary years, or the two extra days in leap years? These, as I have mentioned, are taken out of the week; they are not called by any of the names of the week. It is proposed that the 365th day shall come at the end of the year, between Saturday, 30 December, and Sunday, 1 January, and be called *Worldsday*. It can conveniently be celebrated as a public world holiday devoted to peace. What could be more fitting than that this day, following so closely after Christmas when the spirit of good will is prevailing, should be dedicated to world peace. The 366th day in leap years will similarly be placed between the second and third quarters of the year;

it will come between Saturday, 30 June, and Sunday, 1 July, and be called Leapyear Day; it also can be celebrated as a public world holiday. The arrangement by which these holidays fall between Saturday and Sunday is the most convenient for the public.

It will be recalled that the problem of providing a satisfactory calendar, with which men had struggled for centuries, was solved by the simple—but at that time quite novel—device of adding one day to a 365-day year at appropriate intervals. The inconveniences of our present calendar can in a somewhat similar way be obviated by taking one day—or in leap years two days—from the seven-day week cycle.

The only objection of any force raised against this reform of the calendar is, as far as I am aware, that it breaks the continuity of the week. This continuity was not broken in any country when the Gregorian reform was introduced. The earlier reform of the Roman calendar, by Julius Caesar, was made before the seven-day week had come into general use: it was, of course, in use by the Jewish people at that time, and their calendar was not affected by the reform. For religious purposes the Jews still use their own special calendar, in which New Year's Day can fall on any day from 5 September to 5 October. If and when The World Calendar is introduced, it will be for the Jewish people to decide whether the Sabbath will be celebrated every seventh day without exception, in which event it would progress through the week, or whether it will continue to be celebrated on Saturdays as at present. This latter would entail that once or twice a year six days of labor would be followed by two days of rest instead of by one. I venture to suggest that the *spirit* of the commandment ("six days shalt thou labor . . .") is not broken by such a procedure, and that its *letter* suffers a greater violation in the five-day working week which is in wide use today. Further, it necessarily happens that in these days of rapid communication the day has somewhat changed its meaning: for the air traveller the day may have 30 hours or more, or it may have 18 hours or less. The traveller by sea or by air who crosses the date line may have a week of six days or of eight, according to the direction in which he travels; he may have two consecutive Sundays or he may have none at all.

O tempora, O mores! With changing times, customs must change too. We cannot stand still if we wish to progress. The question of the calendar is primarily a civil matter; religious calendars, such as the Jewish, the Muslim and the Hindu, can exist alongside the civil calendar and be independent of it. If, however, any religious calendar can be brought within the framework of the civil calendar, it makes for more general convenience. But the decision whether this is possible without violating the spirit of any religious law or custom is a matter for the spiritual leaders and is not one which need concern us. For my own part in considering how our civil calendar can be improved, I see no objection to the occasional interruption of the continuity of the week.

I have mentioned that the Gregorian calendar was adopted by different countries at different times. In our modern world, with its rapid communications, it is most important that any scheme of calendar reform should be accepted by all civilized countries and introduced by all at the same time. That is why a proposal to adopt The World Calendar is being brought before the Council and General Assembly of the United Nations Organization by the Government of India. Its acceptance by this body is necessary for its introduction. There is need, however, in each country for a campaign to explain its advantages and merits, its convenience and simplicity, so that a popular demand for its introduction may be stimulated.

TIME COUNTS: FORTHCOMING BOOK

A Review by Robert Brown

IT has been my pleasant privilege to read the galley proofs of a forthcoming book, *Time Counts*, which will be published early next year in England and the United States. The author is a Canadian, Harold Watkins, now a working journalist in London. The British publisher is Neville-Spearman; the American edition comes from the Philosophical Library (\$4.75).

The title alone will arrest attention. The subject is not exactly new, but here at last is an author who has imposed order and sequence upon a topic hitherto handled without much effort at bringing discipline and historical symmetry into its complexities.

Man's efforts to cope with time, down through the ages, have been a tangled web. From one viewpoint, the quest for accuracy in time measurement seems but another aspect of the eternal search for perfection. And this is exactly the matrix of the situation as Mr. Watkins sees it. The pursuit of perfection in calendar matters, he says, is idealism in its purest sense, a quality which often seems lacking in modern world affairs. The events recorded in Mr. Watkins' book become a crusade of unselfish perseverance, and the calendar reformers link hands with all other great pioneers of progress.

It is significant that this volume appears at a time when *The World Calendar* is on the verge of realization. Its pages therefore become a signpost to the future

for those still in doubt, and an impressive record of achievement for those who have labored valiantly to bring the change.

From time immemorial man has been increasingly aware of the flow of time around him. The sun, the moon and the stars marched in a regular pattern which prehistoric man observed carefully. The seasons followed each other with a certain regularity; his crops were sown, came to fruition, and withered. Such evidences of time's passage man pondered in his heart, and they stimulated him in his efforts to judge time, to evaluate it, and to record it in some crude fashion. He evolved the notion of the month from the phases of the moon, and the year fixed itself on his mind even though he did not yet comprehend it as the inevitable consequence of the earth's sure journey around the flaming body of the sun.

The judicial mind is not satisfied with any spotty chronicle of these developments. As Horace Greeley once said to a young reporter, "Let's hear the whole story." Mr. Watkins, out of a long journalistic experience, has worked out the whole story of calendar reform over a period of at least sixty centuries, and from it has selected a comprehensive pageant of figures and events.

He has a journalist's fondness for the unusual. For instance, in discussing ancient calendars, he touches lightly on Babylonia, Egypt and the intricate systems of the Incas and Aztecs. But he de-

votes an entire chapter to the less familiar Tiahuanaco ruins of South America, and points out the significance of an exotic monolithic gateway high in the Bolivian Andes, a calendar relique of an advanced people whose time-reckoning may have been the oldest in the world.

There are ancient calendars which we know more about—the remarkable Stonehenge in England or the megalithic monuments of northern France. The Egyptians aligned their pyramids in such a manner as to leave no doubt of their interest in the “celestial cycle.” The notched stick was the forerunner of the sundial, the clepsydra, the clock and the modern calendar. Egypt’s calendar story is the clearest in the pages of history, perhaps because the annual flooding of the Nile was itself a calendar and was so significantly a feature of that civilization.

Then the Roman colossus, Julius Caesar, appeared on the scene, and time-measurement began to approach scientific accuracy. No scientist himself, he had the rare ability to know a real scientist when he saw one. His system was the work of a Greek-Egyptian astronomer who visualized the first “perpetual” calendar. Each New Year began on the same day, and the year on 1 January. Leap year came into existence.

Not until the Venerable Bede in the eighth century was it discovered that the Julian calendar miscalculated the length of the tropical year, and it was another 800 years before this fact impressed itself on Pope Gregory XIII, who was as zealous and capable a reformer as Caesar had been. By that time the equinoxes were more than ten days out of line. It was a trying situation for the Pope. To drop ten days from the calendar seemed to

many people equivalent to tampering with divine law, but the reform was pushed through. It was a test of the papal authority, and Gregory knew it. Evidences of the resulting conflict were still apparent a century later, in the reluctance of certain Protestant countries to accept papal leadership.

The most conspicuous example was England, where the remarkable personality of the Earl of Chesterfield finally asserted itself in 1751. (It is the impress of these vivid personalities that has invariably sparked calendar reform, as Mr. Watkins is ever-aware.) The celerity with which Chesterfield’s bill passed both houses of Parliament was a tribute to the overwhelming quality of his leadership. If the British people did not actually riot in the streets—as was reported by some chroniclers—at least they were thoroughly irritated about losing eleven days. Many actually suspected that they had been deprived of some wages, or that Parliament had shortened their lives. The records of the event are rich in anecdotes, which Mr. Watkins tells with gusto.

American readers will find a forgotten incident from their own history in a chapter which Mr. Watkins titles “Maryland Mystery.” It seems that back in 1745 a citizen of Maryland wrote a letter to the *Gentleman’s Magazine* of London, suggesting corrections for the calendar’s most conspicuous faults. He signed himself with the weird nom-de-plume “Hirassa ap-Iccim,” and his identity is as obscure today as it was back in 1745. Fifty years before Mastrofini, he proposed the use of a stabilizing day to make the calendar *perpetual*, with its weeks set definitely and immovably into the pattern of the years. He argued for a fixed

Easter, and tabulated the defects of the Gregorian calendar in an analysis as sharp as that recently published by Trygve Lie for the United Nations. Mr. Watkins calls him the "Mystery Man" of modern calendar reform.

In dealing with the current movement, Mr. Watkins shows a satisfying sense of perspective. He goes back as far as the French Revolution in recording what he terms "the conflict between folly and good sense." At the time of the French Revolution, the elephantine labors of the Republicans to produce a scientific calendar were negated by Napoleon's political expediency. It was a brave experiment but it lasted only 13 years, and never got far beyond the boundaries of Paris. Later, the French Positivist philosopher, Auguste Comte, produced a 13-month calendar, and did an extraordinary job of re-christening all the months and weeks. In 1884 the Astronomical Society of France, under the leadership of the celebrated astronomer Camille Flammarion, sponsored an ambitious prize contest for the best plan of an improved calendar, and this enterprise was the precursor of the modern crusade.

Even the expertly concise Mr. Watkins can do little more than hint at the astounding conflux of calendrical projects which were suggested in the early twentieth century. However, he gives us the story, with an abundance of interesting detail.

His catalogue of calendar "projects" reaches its crescendo with the attempts of the League of Nations to arbitrate the calendar dispute, and the zealous efforts of Miss Elisabeth Achelis to promulgate the logical plan for a twelve-month equal-quarter calendar. It had been apparent since the early 1930s that a 13-month

calendar scheme had lost its initial support, and that hope of success lay with The World Calendar Association's proposal. From its incorporation in 1930, this organization received the full complement of force and direction which had been in abeyance since the time of Gregory. It set up a gallant front against public apathy. The League of Nations passed into the limbo of forgotten things, but the United Nations held new hope that a day of rational progress was imminent. By 1953 the forces in favor of calendar standardization seemed well-marshalled, and Mr. Watkins eagerly anticipates the inclusion of a calendar-reform bill on the agenda of the UN in 1954.

It is as a cavalcade of events and personalities that the author has recorded these stages in calendar development. What emerges is a well-documented case for the much-disputed Great Men theory of history. He produces a convincing argument for the importance of influential personalities in initiating reform. Such personalities can overcome indifference and give leadership to a cause.

The book is required reading for everyone interested in the calendar. It has the literary virtue of a steadily-mounting interest. It is a success story, but more than an individual success story. If scientists are able to measure the evolution of man by the examination of a single bodily organ, so man's social-economic progress may perhaps be measured by the mutations of his efforts toward perfection in such a comparatively isolated enterprise as the measurement of time. The gradual triumph of The World Calendar is a demonstration of rationality overcoming a tangle of superstitions, old customs and sectarianisms.



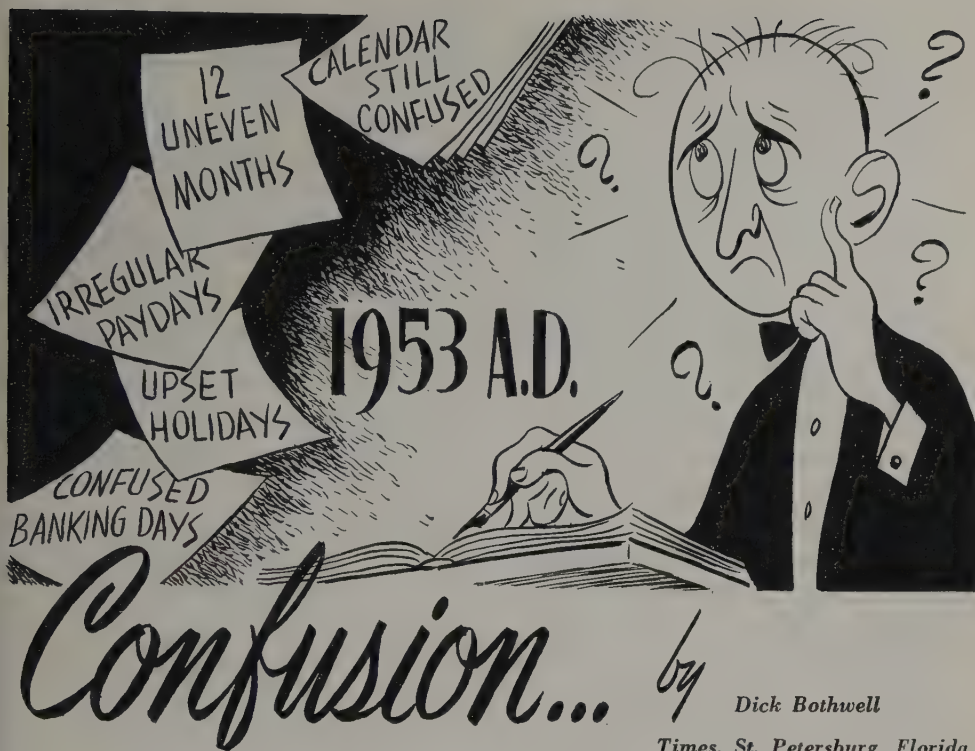
EVER since 46 B.C. (named the “Year of Confusion” because some well-meaning Roman politician made it 15 months long), people have been kicking the poor old calendar around. It has suffered so many alterations, amendments and mutilations that a whole museum might be filled with nothing but calendars—and no two alike.

As a result, here comes A.D. 1954, and we’re still confused. The calendar is the most irregular measuring stick in the whole tool-box of civilization. Nothing is ever where you put it the year before. Holidays bust out in the middle of the week; bills fall due quicker than you expected; pay-days are either more or less than you planned—mostly less, I

find. Could Milton have been thinking of the calendar when he wrote those familiar words “Confusion worse confounded”?

On top of all the derangements and dislocations that have been listed by the United Nations, I personally have a little pet grudge against the prevailing method of registering the passing months—because I never can remember that curious little verse about “Thirty days hath December, May, July and October, excepting Christmas which hath 38”—or something like that. (If I haven’t quoted it exactly right my lapsus linguay only goes to prove my point.)

Up to the present moment, I have put up with all this foolishness because I



by Dick Bothwell

Times, St. Petersburg, Florida

assumed that the calendar was a sacred cow which couldn't be challenged without throwing our solar system out of whack. I figured it had been installed by some prehistoric medicine man whose wonder-work had always been accepted without question and would continue to be accepted world-without-end-amen.

Now I suddenly learn that a lot of folks are fed up with our patchwork of days and are determined to correct the situation. For twenty-odd years these people have been advocating a revised system called The World Calendar. It is a practical four-quarter year designed by some folks who can count.

This I learn thanks to their quarterly candle in the wilderness of days, a pub-

lication called the *Journal of Calendar Reform*.

A friend of mine from Pensacola has an article in a recent issue of this learned journal. It is entitled "Lessons from Travel and Tourism" and it appears smack on page 123, right in the middle of the book. The author, Allan P. Ames, is district manager of the Florida State Chamber of Commerce, and in that capacity he has to think about a lot of subjects which never occur to ordinary run-of-the-mill human beings like you and me.

He says in his article that calendar reform would help everybody in the tourist business, as well as all varieties of business men, teachers, lawyers, bank-

ers and farmers. He proves his point, right up to the hilt, by argument, parable and practical application.

His article led me to do a bit of personal interviewing, just to see what people think. Talking to a visiting railroad man who was vacationing in Florida from his arduous job of getting out timetables and adjusting them to all the vagaries of the calendar, I discovered that just because holidays "move around" every year, all train schedules have to be continuously juggled and revised.

In another interview, this time with a business man from the midwest, I learned that sales comparisons and inventory figures are a perpetual headache because of shifting holidays and the varying incidence of weekdays. A retired school teacher said the same situation prevailed in making up school programs.

Ames must have been an earnest student at dear ol' Hamilton College; at any rate, he has the scholastic background to take a subject like this right back to fundamentals. In his article he explains it all very convincingly.

He shows that our calendar difficulties go right back to Mother Earth, who started the whole thing by taking 365 days, 5 hours and 49 minutes to go around the sun. Dividing this circuit-time into 24-hour days, you wind up with a left-over of 5 hours and 49 minutes. Therefore, every fourth year it is necessary to tack on a leap day. (If you are slightly confused at this point, shake hands with me: you're only at the beginning of an astronomical lesson that needs your utmost powers of concentration.)

Now, the shifting of weekdays, year after year, comes about because 365

days are not exactly divisible by 7. In a 365-day year, we get 52 weeks—plus a left-over of one day.

Listen to what the calendar reformers are going to do about that little matter: "Back in 1834," they explain, "the Abbot Marco Mastrofini of Italy suggested a 364-day year, with the 365th day added—outside the week—with a name of its own. By this simple device, every new year begins on Sunday and the calendar becomes perpetual, the same every year."

The only objection I can find to the whole idea is that it will shift a few time-honored holidays from their traditional places, in order to get them permanently anchored to week-end spots. My friend Ames has the answer to this. As he points out, a good many of our holidays are misplaced anyway. Washington was born on the 11th of February, although we celebrate his birthday on the 22d. Columbus Day is 12 October, but he actually landed in the New World on 23 October. And so on.

It seems to me that the more one digs around in history, the more one finds that nothing much happened when it is supposed to have happened, and sometimes not even then. Of course, under the new calendar, a few people might lose track of their birthdays, but what a golden opportunity for some of the fair sex to readjust things according to their current whim!

It will be nice to tack a *permanent* calendar on the wall, with every year the same—as it ought to be. We can have the same dates and the same days—and just change Marilyn Monroe's picture each first-of-January.

My hat's off to you, World Calendar!

EXCERPTS AND REVIEWS

For a Happier New Year

By JAMES AVERY JOYCE

(In *Friendship News*, London)

AT the beginning of every New Year there is a slaughter of the innocents. Thousands and thousands of calendars and diaries are thrown onto the scrap heap. Century after century, mankind starts a different calendar with every year. Why? Each year has the same 365 days, with one extra day thrown in for leap year every four years, for each year is roughly of the same length, as the universe is made that way! Why, then, a different calendar every year?

Some people like to assert, when they are told that there are actually twenty-eight kinds of months now in use, (as they once did about the introduction of Summer Time): "God made the calendar, so only God can change it." Nonsense! Our calendar is a man-made affair. As a matter of fact, all kinds of men and all kinds of civilizations have had a hand at making it.

Even if Pope Gregory, in the sixteenth century, could have claimed some divine direction in fixing the "Gregorian Calendar," the changes he introduced (mainly concerning leap year) made little difference to the old, old calendar, which had survived the Fall of Rome and the Dark Ages and remained as Julius Caesar had decreed it, a generation before Christ. Those illogical summer months of July and August, with 31 days each, give mute testimony to the influence of Julius and Augustus—both Caesars. Neither memorial was allowed to out-top the other—hence the maximum allowance of 31 days each!

No: our calendar is very much a man-made affair—full of man-made errors and crass stupidities. And that is why calendar reform has emerged as such a live issue in the twentieth century.

It just happens, however, that very little structural change is needed to make it a

"fixed" calendar from year to year and to balance up the months a bit, so that we don't have one month (e.g. February) with 24 *working* days and the next month following with 27 *working* days. Imagine trying to work out production schedules for a big industry between one month and another, with about 12 per cent difference between two succeeding months, due to the varying yardstick of the accounting period! No end of trouble is caused to banks, business houses and civil services, no less than to schools and law courts, by reason of these irregular intervals of measurement.

Calendar reform, in the modern world, can only be achieved by *international agreement*. The Economic and Social Council, and other U.N. organs, have already discussed the question. It will be coming up again for discussion and decision pretty soon. Here is another instance of mankind planning peaceful change in a field which affects all human communities alike. India, for example, has its own official Calendar Reform Committee, and India is backed by many other countries who want the world-wide adoption of the reformed calendar, if possible by Sunday, 1 January 1956, when the old and new calendars coincide.

Time for Revision

By MARY BARKER

(Editor of *Pears Cyclopaedia*, London)

AS an encyclopedist, I find myself continually delving into the background of the calendar. The toughest part about editing an encyclopedia is that one is expected to know all the answers—whether it's the size of a pingpong table, the names of the Queen's Windsor Greys, the dietary habits of a dormouse, or why Easter wanders so vaguely around the spring season.

Since 1897, *Pears Cyclopaedia* has served as an everyday source of information in countless homes all over the world. It began as an ingenious means of advertising

Pears Soap and has lived on to become a volume successful in its own right. I have been editing the book since 1948, and have just gone to press with the 62d edition. Between times, I handle a voluminous correspondence, answering the public's questionings on all manner of subjects.

Only yesterday I was lucky with Easter Day, for just before I encountered a questioner at lunch-time I had been looking it up in connection with some revisions of my book. "Am I right in assuming that Easter is the first Sunday after the full moon?" asked my luncheon guest. I hesitated a bit before answering, then said: "Yes, but like everything else, it's not quite as simple as that. Easter Day falls on the first Sunday after the full moon following the vernal equinox; only it's not the true moon you see in the heavens, but an imaginary moon, the so-called paschal moon, which is one or two days behind the real moon. You have to thank the Reverend Fathers who sat around the Council table at Nicea in the year 325 for that."

Little did they know what trouble they laid in store for us. Too bad they had no World Calendar Association to advise them.

The moon would seem to have played an all too dominant part in human affairs. Even today there is widespread belief that you can predict the weather by the phases of the moon, though such predictions have no scientific backing whatsoever. I had occasion to note this when weather forecasting was part of my job with the WRENS during the war. I would study all the charts, wrestle with the official documents, keep one eye on the barometer and another on the wet and dry bulbs, and finally come to the conclusion that after the early morning mist had cleared away we would have another fine day. I would leave my office happily confident that I had made an excellent forecast; then en route to my billet I would meet a farmer on his way to round up the cows. "Good morning, Miss." "Good morning, Giles. A nice day." "Don't be too sure, Miss. Mark my words, there'll be a change before the day is out." "What makes you think so?" "New moon,

Miss, always a change at new moon." "But it can't possibly rain, the pressure's too high." "Good-day, Miss." "Good-day, Giles. I hope you're wrong." "We shall see, Miss, we shall see." And in the evening I would go back to my office, to find that a warm front had somehow contrived to creep up across the Channel unannounced.

Just as changes in temperature, humidity and speed of air masses can shift about, and need to be constantly measured by instruments designed for the purpose, so with the calendar—a calendar in this scientific age should be designed on a scientific basis.

There is a fair amount of information on the calendar in my encyclopedia, and a good deal more in my files. In the course of my annual revisions I have found myself delving into folklore, religion, anthropology, astronomy, mathematics and all the other branches of knowledge that are connected with the history of the calendar. It's more complicated than any ordinary person would believe. What average human being, looking at the simple printed tables on his wall, would imagine the manipulations that have gone into its making, over the centuries?

One of the recent questions I was required to answer concerned the historical background for beginning the financial year of official England on 6 April. I found that this is a survival of an ancient reckoning beginning the year on Lady Day, 26 March. The lapse between Lady Day and 6 April is the famous 11 days which were dropped from the calendar in 1752. By this Act of Parliament, 1 January became the first day of the year, instead of 25 March. The ensuing financial year would ordinarily have begun on 25 March and for tax purposes it was convenient that it should continue to do so. As 11 days had been dropped in 1752, 11 days had to be added to fiscal 1753, and that is why the fiscal year in England still ends on 5 April.

It would seem that in such matters we move no faster than Queen Salote's famous tortoise which has recently been celebrating its 200th anniversary in the palace grounds at Tonga. But once in a Blue Moon we make a change—and the next is due in 1956.

RECENT CALENDAR RESEARCH

Irish Studies Continue

By JOHN J. O'MEARA, D. PHIL. (Oxon)

(Professor at University College of Dublin)

ACTIVE interest in calendar reform continues in Ireland, and our study group has received considerable correspondence dealing with the plans and proposals outlined in my article in the June *Journal*. This correspondence has not been confined to our own country: we have received letters from interested people in areas as distant as Australia and Egypt.

Some of our correspondents express anxiety lest we concentrate our studies too sharply on the situation within our own little island. An Egyptian scientist warns us that "the Irish committee will have important international influence only if it is careful not to view the subject from a narrow and parochial viewpoint. It should lay greater emphasis on the need for a calendar which will be *universal* in its application—one that will be acceptable not only to Christians and Jews, but also to Moslems, Hindus and the nations of the Far East. Such universality can only be reached by divorcing time measurement from all sectarianism and religious bias."

He refers apparently to our rather extended discussions of Easter stabilization and the attitude of the Vatican. He goes on:

"The greatest contribution thus far made by the Catholic Church is the Mastrofini suggestion for a year-end intercalary day, which solves the problem of the week. . . . The fact that certain religions—Jewish, Christian and Moslem—follow the conventional week in arranging their worship is merely an acceptance by them of a convenient work unit. Centuries ago they prescribed a rest day after six working days; in today's civilization the trend is toward two rest days after five working days. The world is gradually adopting a five-day work-week, and thus discarding the Hebraic dic-

tum that *six days must thou labor* before getting a free day for worship, rest and recreation."

There is a stormy letter from Australia, criticizing my references to St. Patrick and the Easter controversies in Ireland 1,300 years ago. The writer says: "I can't help being amused and aroused by your skating over thin ice in the matter of the furious quarrels over the date of Easter in the early Irish church. Actually the Irish monks bashed each other with shilleleys and many a broken head testified to religious zeal in this conflict. Eventually the old church founded by St. Patrick was ruthlessly suppressed."

What should I reply? Readers of my article will remember that though I did not mention dark deeds, I hinted at them. As for St. Patrick, the subject is too complicated to attempt to cover briefly. I am satisfied if I have escaped the charge of misrepresenting things, and this I believe I have done. Obviously there is a lot of dynamite in discussing calendar reform, if a mere neutral report by a 20th Century Irishman regarding a calendar dispute in 7th Century Ireland can stir up such ardent passion in a denizen of Australia.

There have been a number of letters of blanket approval of our study projects. They assure us that we need not be overmodest about the fact that Ireland "is a small country of little power and political influence." One of our correspondents comments: "In a subject like this a little country such as Ireland can contribute just as much to the discussion as a big nation, since *truth* does not become a better truth by mere multiplication. The scattered Irish race has an important contribution to make on international subjects, and is making it."

Of course, our study group has never contended that the size of a country affected the truth or justice of the cause it espoused and promoted. Our point was rather that, sup-

posing a cause to be just, a majority can in the normal way do more to promote such a cause than can a minority. When right and might are found together they make a formidable combination. And as great powers become greater through the accession to their cause of smaller powers, so smaller powers take on an importance out of proportion to their size when their help is solicited by powers that are greater than themselves. And of course the cooperation is all the stronger when it is free and based on justice, as in the case of calendar reform. In all these points Ireland enjoys whatever advantages—and disadvantages—arise from a country's being small. There is also the additional factor that Ireland has a very large emigrant population in America and in the countries of the British Commonwealth; this always enhances Ireland's position vis-a-vis cooperation on questions of mutual interest.

More Moslem Comment

By PROFESSOR PRANKUMAR GHOSH
(Visva-Bharati University, India)

IN the June issue of the *Journal*, Dr. Hashim Amir Ali presented a very valuable study of the problem of introducing The World Calendar in Moslem countries. His article was supplemented in the September *Journal* by an enthusiastic endorsement from the Ministry for Education of India.

Dr. Ali's thesis has ushered in a new era of progressive ideas in the realm of the Crescent, and the following conclusions of far-reaching significance have clearly emerged from his analysis of the subject:

1. The purely lunar Hijri calendar owes its birth to a misconception of the words of the Koran. This misconception was the work of Mohammed's followers, who introduced the Hijri calendar after the death of the Prophet.

2. This unwarranted and unrealistic calendar is responsible for the rotation of the Hajj through the hottest and coldest months of the year, and has in fact kept Moslem religiosity oblivious of the seasons and the rhythm of nature for the past 1,300 years.

3. Intercalation is definitely *not* forbidden. The procedure which the Prophet condemned was rather *the manner* in which this intercalation was applied by the Qalamas during the lifetime of the Prophet.

4. The clear injunction of the Koran that there are only 12 months in God's calendar, and of these only four months are sacred. Therefore any calendar which involves a 13th month (by way of intercalation) and causes confusion regarding the Koran's injunctions stands condemned.

5. It therefore follows that neither the luni-solar calendar of the Arabs nor the purely lunar calendar conceived by the erring disciples of the Prophet has any right of existence in the Moslem religious sphere.

6. Since the solar year, arising out of the apparent revolution of the sun around the earth, has a natural rhythm of 12 months only, the above conclusions make a clear-cut case for the adoption of a purely solar calendar in the Moslem world.

In the attempt to pave the way for the adoption of The World Calendar in Moslem countries, Dr. Ali has given the 1300-year-old lunar calendar rather a mighty jerk and twist at its very root. In doing so, he has behaved most admirably: he has nowhere taken cover behind a smoke screen of untenable hypotheses or distorted ideas. He has proved that the present calendar should be rejected and replaced by a purely solar reckoning, and once this is accepted, the adoption of The World Calendar will follow as a necessary corollary, being a distinct improvement over the present system.

We ask ourselves, can such a calendar reform win in the Moslem countries? It is for the Moslem intelligentsia to answer. Dr. Ali has indicated the correct line of approach to the problem. It is now for Moslem leaders to think and act. I believe that the inexorable forces of nature will sooner or later carve out a path for the truth of his thesis, through the religious dogmas and superstitions in which much of the Moslem world is still submerged. I congratulate him on his bold liberalism and I am sure his ideas will have the widest publicity in the realm of the Crescent.

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EDITORIAL PARAGRAPHS

In this rapid-moving and epochal century, it is surprising that the calendar hasn't been regulated to international business long before this.—*Waterbury (Conn.) Republican*.

If accepted, The World Calendar will produce great convenience and simplicity.—*Hindu, Madras, India*.

For many years now a group of scientists, philosophers and others of learning have advocated The World Calendar. They are pressing hard to have the United Nations adopt it in 1956.—*Lexington (N.C.) Dispatch*.

Since 1926 the International Hotel Association has vigorously supported calendar reform. We look forward to its final adoption in the interest of the world's economy as well as of foreign travel.—*Hotel Restaurant Review, Heidelberg*.

Adoption of The World Calendar will mean the elimination of a great deal of unnecessary bookkeeping.—*Burbank (Cal.) Review*.

Proposals for a rational calendar have numerous supporters, including people of high official standing, who demand action without delay.—*Le Peuple, Bruxelles, Belgium*.

Changing the calendar would eliminate a great deal of confusion existing under the Gregorian system. The proposal for The World Calendar by 1956 is worth watching. Employers and employees should be interested. Both will benefit.—*Quincy (Mass.) Patriot Ledger*.

On the question of calendar reform, the Astronomer Royal comes out for The World Calendar plan as the only one deserving serious consideration.—*Courier and Guardian, Halifax, England*.

Advocates of calendar reform point to the world's imperative need for unity. If anyone doubts that a revised calendar will pro-

duce world unity, its advocates reply convincingly that "world unity must start with small matters," which will prepare the ground for greater ones.—*Progres, Paris*.

Business interests favor The World Calendar because it provides a better distribution of business days in each quarter.—*Warroad (Minn.) Pioneer*.

Rotarian Edward Flynn, speaking at the Chateau Frontenac, gave a fluent and convincing argument for calendar reform, showing how much labor, business and the professions would benefit by adoption of The World Calendar.—*Nouvelles Rotariennes, Quebec*.

In the Gregorian calendar each year begins on a different week-day than its predecessor, so does each month. This faulty system is currently under the critical eye of earnest reformers.—*Meriden (Conn.) Record*.

The practical problem of getting calendar reform is neither as simple as some think nor as hard as others think.—*Mail, Dublin, Eire*.

Various proposals for reform of the existing system of dividing time into days, weeks, months and years have been suggested. The World Calendar is the latest, with a plan for making "every year the same."—*Pater-son (N. J.) Call*.

There is a great movement for a calendar reform in order to make a universal calendar for the whole world, dividing the year into equal quarters.—*Indian Accountant, New Delhi*.

Canada, which took the lead in giving the world Standard Time, may be the first to propose that all nations adopt a World Calendar.—*Erie (Pa.) Times*.

We need a new calendar today, a streamlined calendar for a streamlined world.—*Chronicle-Telegraph, Quebec*.

The World Calendar Association, Inc., will gratefully receive contributions for furthering its work. Such contributions are tax exempt under Federal and New York State Income Tax laws.



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Journal of
**CALENDAR
REFORM**

INTERNATIONAL ACTIVITIES

SCIENCE & INDUSTRY

April 1954

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THE WORLD CALENDAR

1ST

QUARTER

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

2ND

QUARTER

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

3RD

QUARTER

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
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29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

4TH

QUARTER

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
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29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

Worldsday, (a World Holiday), W or 31 December (365th day), follows 30 December every year.
The Leapyear Day, (another World Holiday), W or 31 June follows 30 June in leap years.

In this Improved Calendar:

- Every year is the same.
- The quarters are equal: each quarter has exactly 91 days, 13 weeks or 3 months; the four quarters are identical in form.
- Each month has 26 weekdays, plus Sundays.
- Each year begins on Sunday, 1 January; each working year begins on Monday, 2 January.
- Each quarter begins on Sunday, ends on Saturday.
- The calendar is stabilized and perpetual, by ending the year with a 365th day that follows 30 December each year, called Worldsday dated "W" or 31 December, a year-end world holiday. Leap-year day is similarly added at the end of the second quarter, called Leapyear Day dated "W" or 31 June, another world holiday in leap years.



ONE WORLD CALENDAR FOR ONE WORLD

VOL. XXIV

APRIL 1954

No. 1

"The past brings us many gifts: indeed, all that we have today of culture, civilization, science or knowledge of some aspects of the truth, is a gift of the distant or recent past to us. It is right that we acknowledge our obligation to the past. But the past does not exhaust our duty or obligation. We owe a duty to the future also, and perhaps that obligation is even greater than the one we owe to the past. For the past is passed and done with, we cannot change it; the future is yet to come, and perhaps we may be able to shape it a little. . . ."—JAWAHARLAL NEHRU.

IT is a strange deviation from the normal that two nations as progressive and enlightened as the United States and Great Britain should oppose the international consideration of such a reasonable and scientific matter as the improvement of the calendar.

Yet this was their position at the December first meeting of the Economic and Social Council. Their attitude was defeated by a 12 to 2 vote.

India regards calendar reform as an urgent matter; so do several other important countries, including the South American bloc. The British and American delegations, embarrassed by a campaign of opposition from two minor religious groups of extremely orthodox Jews and Seventh-Day Adventists, would like to bypass the subject as though it didn't exist.

Supporters of calendar reform at the United Nations maintain that calendar reform is a civil question, unconnected with religion. The supporting nations include 12 Christian countries (of which seven are predominantly Roman Catholic and one Eastern Orthodox), four Mohammedan countries, one Taoist-Buddhist, and one Hindu-Mohammedan. Obviously this is no forum for the solving of such religious questions as the stabilization of the Christian Easter, or the wandering character of the Moslem pilgrimage season, or the variant eras of Hindu religious calendars. Religious questions, then, have no place in the international program of the United Nations, but must be left to the decision of the respective religious authorities. One of the inherent principles of a universal calendar must be that it is *completely* separate from religious, racial or national *bias*, uniting all peoples in a common bond of time.

Fourteen nations supported calendar reform in 1937, when the League of

Nations submitted the question to all governments. Three more countries added their approval in 1948—Syria, Saudi Arabia and Czechoslovakia. Additional nations which have recently indicated an affirmative attitude include India, France and possibly Russia.

There are 18 countries represented on the Economic and Social Council, with membership changing somewhat from year to year. At the Geneva meeting next June the following 18 nations will be members: Argentina, Australia, Belgium, China, Cuba, Czechoslovakia, Ecuador, Egypt, France, India, Norway, Pakistan, Turkey, Russia, United Kingdom, United States, Venezuela and Yugoslavia.

The verbatim minutes of the December ECOSOC meeting are reproduced on page 4 of this issue of the *Journal*. For the further information of our readers, we are printing the following letter sent by the President of The World Calendar Association to Secretary of State John Foster Dulles:

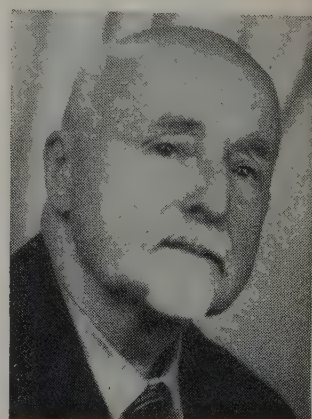
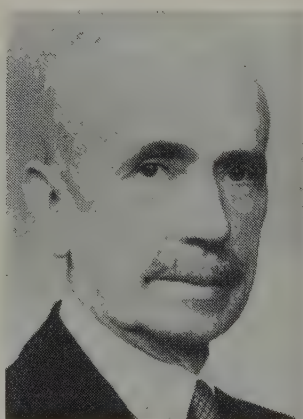
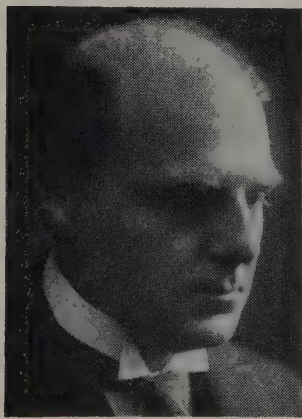
My dear Mr. Secretary: May we respectfully request a fresh survey of the attitude of the U. S. delegation at the United Nations in respect to the proposal of India for consideration of calendar reform at the 18th session of the Economic and Social Council?

The subject was placed on the provisional agenda on 1 December, by a vote of 12 to 2. Mr. Wadsworth regretted that he could not support India "because the agenda for the 18th session was already overloaded and the Council would certainly not have time to consider such a highly technical question which incidentally would call for a great deal of information and study."

May we venture to suggest that Mr. Wadsworth had no reason to suppose that the India motion at the 18th session will require any considerable amount of time or consideration. If the India motion, for example, involves only the appointment of an ad hoc committee, it seems unreasonable to suggest that this needs prolonged debate.

Moreover, Mr. Wadsworth's statement that calendar reform is a "highly technical question" requiring "a great deal of information and study" is questionable, considering that the subject has been exhaustively studied and researched over a period of more than 25 years.

This is a subject which sooner or later should be met with something more than the camouflage of diplomatic language. If the United States delegation cannot yet take a yes or no position, it should at least stand aside and let the reasonable request by India prevail.



The late Paul-Louis Hervier, long-time head of the calendar reform movement in France; obituary on Page 20 . . . Professor A. D. Ross, chairman of the new Australian committee . . . Pasteur Jules Jézéquel of Pau, distinguished French Protestant leader; article on Page 33.

Journal of

CALENDAR REFORM

APRIL 1954

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Charles D. Morris, Editor

Linda Halsted, Associate Editor

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OFFICIAL MINUTES OF ECOSOC

Debate on India's Motion regarding Calendar Reform, 1 December 1953

THE President invited members of the Council to consider the India delegation's request for insertion of an item "World Calendar Reform" in the provisional agenda for the Council's 18th session (Geneva, June). Mr. Jung (India) said he did not propose at this stage to enter into the substance of the item which his delegation desired to have included in the Council's agenda. He wished to stress, however, that its inclusion would not in any way prejudice the positions of members of the Council on its substance.

Mr. de Seynes (France) felt that the Indian proposal should be supported, as the question had long engaged the attention of a number of governmental organizations. He had received no instructions on the matter, but was willing not only to vote in favour but also to recommend his Government to consider what action should be taken on the proposal.

Mr. El-Tanamli (Egypt) said he would vote for the inclusion of the item proposed by the Indian delegation, for his country firmly believed in the principle that any request from a Member State for the inclusion of any item in the Council's or the General Assembly's agenda should be granted.

Mr. Rodriguez-Fabregat (Uruguay) stated that his delegation would be glad to see the Council tend to a question in which large groups in many countries, including his own, were interested.

Mr. Wadsworth (United States) regretted that he could not support the Indian delegation's request because the agenda for the eighteenth session was already overloaded and the Council would certainly not have time to consider such a highly technical question, which, incidentally, would call for a great deal of information and study.

The item entitled "World Calendar Reform" was inserted in the provisional agenda for the eighteenth session of the Council by 12 votes to 2, with 4 abstentions.

Mr. Bihin (Belgium) said that his delegation, not having received any instructions from its Government, had abstained from voting and was obliged to reserve its attitude towards the new item.

Mr. Meade (United Kingdom) said he had voted against the Indian motion for the same reasons as had been specified by the United States delegation.

Mr. Arkadyev (Union of Soviet Socialist Republics) and Mr. Alvarado (Venezuela) said they had abstained because they had not had sufficient information to be able to adopt a position.

Mr. Hsia (China) and Sir Douglas Copland (Australia) stated that they had voted in favour of the insertion of the proposed item in the agenda for the eighteenth session in the conviction that the Council would not consider the item at its eighteenth session if its agenda in fact proved to be overburdened.

UNESCO REVIEWS CALENDAR PROGRESS

From the Unesco Courier, Paris

As the official organ of the United Nations Educational, Scientific and Cultural Organization, the Courier is published monthly in English, French and Spanish. Each month it devotes a section to "an authoritative treatment of an important world problem" and shows how it is being dealt with nationally and internationally. The January issue takes up calendar reform in its historical background, leading to the current proposals of India for the international adoption of The World Calendar. Copies of this text in French and Spanish are available on request.

THIS earth on which we live is a globe, spinning around on its axis once a day, revolving in its great orbit around the sun once a year, and with the moon revolving around the earth once a month. It is not an accident, nor is it good planning, that these three motions fit so neatly into our time-scale of days, months and years. The truth is that the motions are what they are, and have been for countless millions of centuries, determined by celestial forces since long before man appeared on the earth. It takes just a day for the earth to turn once on its axis because the word was made to fit the motion. A day is defined as the length of time it takes for that rotation. So, too, the words "month" and "year" were made to express astronomical motions that man cannot alter.

Since those three independent astronomical motions are beyond human control, we must take them as they are. It is awkward that they are not related to each other in any simple numerical way. It would be much simpler if they were arranged by the decimal system, for instance, so that there were ten days in a month and a hundred days in a year. Or perhaps by the dozen, with twelve days in a month and twelve months in a year. But nothing can be done about that. The fact is that the moon makes its circuit around the earth in $29\frac{1}{2}$ days, while the earth makes a complete circuit of its orbit in close to $365\frac{1}{4}$ days. Even without the fractions, these are odd numbers and there is no simple relation between them.

That is the fundamental problem of the calendar, with which men have struggled for thousands of years.

Days must be counted and for human affairs must be arranged in some sort of order. There must be established periods for business, for the seasons and for holidays and holy days. But the day does not fit either the period of the moon or of the sun, the month or the year. Most ancient peoples in all parts of the earth originally chose the motions of the moon as the basis of a calendar, probably because the moon's motion is easier to observe. So the Babylonian and Egyptian calendars of 6,000 years ago were based on periods of the moon, and the Chinese calendar 4,000

years ago also. In ancient Greece, every month began with the full moon but the year was counted independently as 365 days.

The Romans combined the two. For them the year, of 365 days, was basic and they gave it twelve months, irregular in length, and not exactly related to the moon's motion, as we do now. Then Julius Caesar, in 45 B.C., allowed for that extra quarter-day in the true year by giving every fourth year 366 days, and thus established "leap-year." That made the "Julian calendar" which was used into modern times.

But it was not accurate enough. The year is not exactly $365\frac{1}{4}$ days long. It is 365 days, plus 5 hours, 48 minutes and 45.51 seconds. That is 11 minutes and 14.49 seconds less than $365\frac{1}{4}$ days. That is not much, but is enough to amount to 19 hours in a century and in 1,000 years to make the calendar about a week behind schedule.

This is precisely what happened under Julius Caesar's calendar. By the year 1582 A.D., the vernal equinox, when the sun begins moving northward again and so marks the first day of spring (autumn in the Southern Hemisphere), was ten days late. It came on 11 March, although the Council of Nicea of the Roman Catholic Church had decreed in 325 A.D. that it was to fall on 21 March. There was nothing to do but to correct the calendar by taking out ten days. This was logically and conscientiously done by Pope Gregory XIII. He directed that the day after 4 October, 1582, should be called 15 October. Thus the present calendar was established.

It was immediately adopted by all Roman Catholic countries but was resisted by both the Protestant and the Eastern nations. Thus for several centuries there was a difference of ten days (and later even more) in the two systems of numbering and naming the days. Great Britain and her colonies did not adopt the Gregorian calendar until 1752 and Sweden followed the next year. It was adopted by Japan in 1873, by China in 1912, by the Union of Soviet Socialist Republics in 1918, by Rumania and Greece in 1924 and by Turkey in 1927.

Simple as the change was in reality, it was very difficult to put into effect. In England there was an enormous outcry: "Give us back our eleven days!" People thought they were losing eleven days of their lives instead of merely changing the names and numbers. So too, today there are people who think they are losing an hour of life when daylight-saving time is introduced and five o'clock is called six. It is human to resist change even when it is only a change of a name or a number.

Pope Gregory made another change to give the calendar its modern form: he began the year on 1 January. Some nations had begun it on 25 December, some on 25 March, as England did, for instance, until 1752. But the numbering system had been adopted a thousand years earlier. In what we now call the sixth century A.D., a Roman abbot named Dionysius Exiguus proposed that the years should be counted from the birth of Christ. This was gradually adopted all over the world, with A.D. standing for the Latin words "Anno Domini," meaning "Year of our Lord." (Actually, modern scholars have found that Christ was probably born four years earlier than was thought in the days of Dionysius, hence in the year 4 B.C.) Thus,

after repeated changes and corrections, our calendar has come to us unchanged for almost 400 years.

How much longer will it serve? There are many reasons for improving it and few reasons for opposing any change—except the enormous inertia of habit.

Astronomically it is now correct enough; the seasons come when they should and, with the several amendments of the leap-year rule, they always will. But for human affairs, and especially for the conduct of modern business, the calendar has many awkward features.

The two halves of the year are not equal, for one thing. The first half has 181 days, the second has 184. Most people work three extra days during the second half, without extra pay. So, too, the quarters vary from 90 to 92 days, and the months from 28 to 31. The number of working days in a month (at six days a week) varies from 24 to 27. All these irregularities are unfair to someone and cause endless irregularities in statistics, such as banking figures, because months and seasons cannot properly be compared with each other.

Another serious defect of the calendar is that the first day of the month is a wanderer among the days of the week; it may be on any day from Sunday through Saturday and it will not be the same next year as this year. Thus any calendar holiday, like 25 December, may come on any day of the week while any religious holiday, such as Easter, may fall on any date in the month. There are 14 different calendars in the course of a century.

All this leads to many difficulties in setting the dates for special holidays, fairs, elections, the opening of the legislature, and other public events. In industrial countries, it would be very desirable to have such events as Christmas and the national holiday fall always on a Monday in order to give a "long weekend."

And not to be forgotten are those unfortunates who were born on 29 February—and can have a birthday celebration only once in four years. Worst of all, perhaps, is that no one can really know the calendar as he knows the alphabet. There are many who cannot remember how many days there are in any particular month, August for instance. Everyone must look to a printed calendar to keep his dates in mind. Much money and paper is wasted annually in all countries just to keep printed calendars available to everyone. In short, the calendar is complicated and irregular so that there have been many suggestions for its improvement, which have recently grown in number.

The French Revolution adopted a reform that did not last, which had twelve months of 30 days each, with three "decades," or ten-day weeks, per month. This accounts for only 360 days, so that there was a five-day holiday period before the start of the new year, which began on 22 September. Since then there have been many proposals. In 1849, Auguste Comte advocated a year of thirteen 28-day months. This takes 364 days, so that he added a single day as a year-end holiday. This calendar had the advantage that the days of the week always fell on the same dates of the month.

More recently the League of Nations examined no less than 152 different sug-

gestions for improving the calendar. One of them had a year of 73 weeks, each week having five days with every fifth day a holiday. Another had 20 months, each of three six-day weeks, with leap-weeks that had seven days five times a year. Another had a year of twelve 30-day months which were divided into five six-day weeks. After long study, the League decided that the week of seven days should not be changed and eliminated from consideration all proposals except two.

One was a calendar of thirteen months, each with 28 days. The other was a calendar of twelve months with 30 or 31 days in each, but 91 days in each quarter. Both added up to 364 days and left one day over as a special holiday. Both of them retained the seven-day week.

The second of these calendars was The World Calendar which was submitted to the League by the delegate for Chile. When submitted to the member nations, 14 were in favor of it, 6 were opposed, 7 considered it premature, and 18 made no comments. As a result, the fourteen years of study which the League gave to calendar reform ended in 1937 with a committee recommendation to the effect that "it is not expedient for the time being, to contemplate convening a Conference to carry out a reform which in present circumstances would have no chance of being accepted."

But the agitation for a better calendar had not ended. Now it is the Economic and Social Council of the United Nations which has received calendar drafts from many countries and from many international organizations. In 1947, Peru submitted the same "World Calendar" that had been considered by the League of Nations. Most recently, in October 1953, the delegation of India asked that The World Calendar be taken up at a 1954 session of the Economic and Social Council. In submitting it, the Government of India stated:

"Such a revision has been the subject of study and research on the part of experts, institutions and international organizations for many years. The consensus of opinion is that a new time system is necessary, adhering to the customary twelve months; but that it should be uniform—an invariable calendar, perpetually the same, more regular, scientific and advantageous from every point of view than the present Gregorian calendar. . . . The proposed scheme of The World Calendar has overcome the drawbacks of the present calendar. It is scientific, uniform, stable and perpetual with but one unvarying calendar every year."

Its chief characteristics are that each of the four quarters is the same length, 91 days, and that the first day of each quarter, and therefore of each half-year and year, begins on the same day, Sunday. The first month of each quarter has 31 days and the next two have 30. It is, therefore, more like our present calendar than the other proposals that have been made. Its one defect is an inevitable one, that the year cannot be divided into seven-day weeks without one day being left over, because 52 times 7 is 364.

This one day, as in many other calendar ideas, would remain as a year-end holiday. It is proposed to call it "Worldsday" and to celebrate it throughout the world as an international holiday. The India proposal to the United Nations describes this day as dedicated "to the universal harmony and unity of mankind."

In leap years, every four years, a similar holiday would be inserted and observed between the 30th of June and the 1st of July.

Among the advantages that have been listed for this calendar are: the first day of the first month is always a Sunday; that of the second month is a Wednesday, and that of the third month is a Friday. It is a tidy arrangement. There will be five Sundays in the first month of every quarter and five Saturdays in the third month. There will be exactly 52 weekly pay days every year.

Best of all, the calendar will be permanent and in future years it will always be possible to know exactly on what day of the week any date occurred—or when it will occur in the future. It would be exactly the same in any year. Railways would not have to make up new time-schedules each year. Everyone would know that Christmas day is always on Monday. Banks and business houses would appreciate the fact that the end of every quarter falls on a Saturday so that accounts can be closed for the beginning of the new quarter. Radio and television stations would be able to count on exactly thirteen weeks in every quarter. School terms, too, would profit by being placed permanently in an unchanging calendar.

But there are objections, too. Many people will oppose the change merely because it is a change. One objection is religious, chiefly because once in every year and twice in leap-years more than six days would intervene between two successive Sabbath days. Another objection is that the calendar would be uniform and would destroy variety which is the spice of life.

Still another objection is that some persons who were born on the 31st of March, for instance, would lose their birthdays altogether, for if this calendar is adopted there will be no more thirty-first days of March, May or August. On the other hand, there would be four days on which no one has yet had a birthday because those days, 30 February, 31 April, "Worldsday" and the leap-year day, are not on the present calendar. On the other hand, persons born on 29 February would have a birthday every year. But these considerations apply only to persons born before the adoption of the new calendar. They would be forgotten after that.

The India proposal to the Economic and Social Council makes it clear why the U.N. should take up the question of calendar reform now. The present Gregorian and the proposed World Calendar coincide on Sunday, 1 January 1956, so that the change could be made at that time with a minimum of fuss, and everybody would have two years to prepare for the new calendar.

NEWS BULLETIN

DELHI.—James Avery Joyce of London, representing the British Section of The World Calendar Association, was here for a fortnight in January, conferring with government officials and national leaders regarding calendar reform. He spent considerable time with Professor M. N. Saha, scientist-chairman of the National Calendar Committee. On his return trip he stopped in Calcutta, Karachi, Cairo and Jerusalem for conferences.

REPORTS OF WORLD-WIDE PROGRESS

By Harriet A. Lillie

Secretary-Treasurer, The World Calendar Association, International

SUSTAINED progress toward the international enactment of calendar reform was reported at the seventh annual meeting of The World Calendar Association, International, held at the International Building in New York City on Friday, 15 January.

Countries represented at the meeting were: Argentina, Australia, Belgium, Canada, China, Cuba, France, Greece, Japan, New Zealand, Nicaragua, Norway, Panama, Peru, Philippines, Salvador, Switzerland, the United Kingdom, Uruguay and the United States. Reports were also received from India, Ireland, Germany, Brazil and other areas.

Officers of the international organization were elected as follows: President and Director General, Elisabeth Achelis; Assistant Director General, Arthur J. Hills (Canada); Vice-President, Charles S. McVeigh; Secretary-Treasurer, Harriet A. Lillie; International Liaison Officer, James Avery Joyce (England); Liaison Officer for the Far East, Professor A. D. Ross (Perth, Australia); Liaison Officer for the Arab States, Dr. Hashim Amir Ali (Hyderabad, India); Editor, Charles D. Morris.

The President, in an opening address, pointed out that the most active organizations during 1953 were India, Great Britain and Australia. In India, the calendar reform committee appointed by Prime Minister Nehru rapidly completed the first stages of its work and presented its recommendations to the government in Delhi. Its endorsement of The World Calendar and its suggestion that international action should be undertaken without delay had prompt results. The India delegation at the United Nations was instructed to place calendar reform on the agenda of the U.N. Economic and Social Council, and a motion to this effect was handed to the Secretary-General in October, accompanied by a Memorandum which began: "The ideal of the whole world is to have a logical and perpetual calendar to replace the present Gregorian Calendar, because it is widely recognized that the calendar we now use is unsatisfactory for the economic, social, educational, scientific and other activities of man. Modern progress demands the change." The 18 countries which will be members of ECOSOC at the Geneva meeting will be: Argentina, Australia, Belgium, China, Cuba, Czechoslovakia, Ecuador, Egypt, France, India, Norway, Pakistan, Turkey, Russia, United Kingdom, United States, Venezuela and Yugoslavia.

In Australia, formation of a network of state committees was completed, with a central committee in Sydney. Chairmanship of the Central Committee went to Professor A. D. Ross, head of the Pan Indian Ocean Science Association, with the Deputy Chairmanship in the hands of John K. Lavett, a prominent insurance execu-

tive. Membership in the state committees includes such distinguished names as the Archbishop of Perth; Sir Ross McDonald, former Attorney General; Sir Kerr Grant, president of the School of Mines; D. W. Brisbane, head of a newspaper chain; and the three government astronomers from Canberra, Sydney and Perth.

In England, bimonthly meetings of the British Section were held throughout the year in committee rooms of the House of Commons or the House of Lords, and activities of great variety were directed from headquarters in Buckingham Street.

Detailed reports, submitted by nearly all the affiliated organizations, included the following highlights:

Arab States and other Moslem Areas. The Moslem countries which use the lunar Mohammedan calendar include Egypt, Saudi Arabia, Pakistan, Iran, Turkey, the Asia Minor group, the North African states and considerable segments of India, Palestine, Russia and the Far East. Throughout this area the problem of international calendar reform has suddenly sprung to life during the past year. Most of the proponents of The World Calendar for adoption as a *civil calendar* in the above states do not visualize immediate replacement of the Moslem calendar for religious purposes—although the eventual possibility of such a replacement is openly discussed and frankly urged by many Moslem scholars.

During the early part of 1954, Dr. Hashim Amir Ali (Dean of Agriculture, Osmania University, Hyderabad, India), a leading Moslem authority on calendar matters, will visit many of the Arab countries and confer with statesmen and leaders, seeking their support in the calendar reform program at the United Nations. His principal stops will be: Iran, Saudi Arabia, Lebanon, Syria, Iraq, Turkey and Egypt.

Dr. Ali has been an active advocate of calendar reform for about ten years. He is a native of Hyderabad, capital of what was until recently the premier princely state in the center of India. He was educated in the United States, mainly at Cornell University, and returned to America in 1953 under a fellowship from the Fulbright and Ford Foundations. Eight years ago, as a practical calendar reformer, he initiated in Hyderabad a movement to synchronize the dates of the Fasli months with the Gregorian calendar, and finally succeeded, in 1946, in persuading the Nizam to authorize the proposed reform. His success in this far-reaching revision emboldened him, as a liberal Moslem, to analyze the problem of introducing effectively The World Calendar in the realm of the Crescent.

An enthusiastic endorsement of his efforts came this year from the Minister of Education of India, Abul Kalam Azad: "*No religious question arises against its adoption.*"

Argentina. Circulars have been distributed during the past year in support of calendar reform by the Reverend Father Juan V. Monticelli, S.S., and by Chairman Mascarenhas. The Chairman has also maintained active contact with the Foreign Ministry, which for the time being is adopting a noncommittal attitude. The Ministry is well informed on the subject, and is expected to follow the South American bloc in any international ballot.

Australia. After a year of careful preparation, the inaugural meeting of the new Australian Committee for The World Calendar was held in Sydney on 3 December. Officers were elected as follows: Chairman, Professor A. D. Ross (head of the Pan Indian Ocean Science Association), Perth; Deputy Chairman and Executive Officer, John K. Lavett (Assistant General Manager of the Commonwealth Life-Amalgamated Assurances), Sydney; Honorary Secretary-Treasurer, J. E. Marr (business systems consultant), Sydney; Public Relations Officer, R. B. Prowse, Sydney.

The program of activities approved at the December meeting included: (1) A survey of business, scientific and educational organizations to enlist their support; (2) An educational campaign through press and radio (along the lines suggested by the National Research Council) under the direction of Mr. Prowse; (3) An approach to the Federal Parliament, requesting instructions to the Australian delegation at the United Nations to support the move being made by India to legislate calendar reform at the ECOSOC

meeting in Geneva in July, 1954; (4) Organization of state committees to be completed before the end of February.

It is expected that Item No. 4 in this program will be particularly effective. Professor Ross has set an excellent model for the other states in his Western Australia committee, which includes such influential names as the Archbishop of Perth, the Directors of Education and Agriculture, the Government Astronomer, the head of the Western Australia Newspapers, the president of the Citizens Rights Association, a former president of the Chamber of Manufacturers, and the eminent lawyer Sir Ross McDonald, former Attorney General.

On 30 September the Council of the Royal Society of New South Wales supported The World Calendar and approved Mr. Lavett's plans for organization of the new Australian Committee. In October he received the approval of the Retail Traders Association, a powerful body with Commonwealth-wide membership; the Australian Council of Retailers at its annual fall meeting in Perth, passed a resolution to support The World Calendar.

At the end of December, Professor Ross left Perth on a trip to Melbourne, Sydney and Canberra, during which he planned to confer with the state committees and assist them in getting their activities under way.

The Second Pan Indian Ocean Science Congress will be held in Perth in August 1954, with Calendar Reform on the agenda as a topic for discussion and endorsement. Professor Saha of India, Chairman of the Calendar Reform Committee appointed by Nehru a year ago, has been invited to attend.

Belgium. Professor Dehalu of the University of Liège has been obliged to resign the chairmanship of the Belgian affiliate, owing to ill health. Pending the selection of a new chairman, the calendar reform situation in Belgium is satisfactory, with official assurances that the government will support The World Calendar in any international discussion of the subject.

Brazil. The cause of calendar reform has lost one of its most distinguished advocates in the death of the Brazilian Chairman, Admiral Radler de Aquino. A reorganization of the committee is expected early in 1954. In the meantime, there has been no change in the government's position, which is entirely sympathetic with calendar revision on an international plane. In fact, Brazil was the first country in the New World to advocate calendar reform, having been drawn into the subject by the French philosopher Auguste Comte more than a century ago. At the League of Nations International Conference in 1931 Brazil unequivocally approved The World Calendar; a stand which has been consistently maintained ever since. During the past twenty years, world leadership in the movement has been carried largely on the shoulders of the Latin-American countries, which will all rejoice to find at the forthcoming meetings of the U.N. that their enthusiasm has now been reinforced by the strong attitude of the government of India.

Canada. There has been no falling-off in Canada's interest in calendar reform during the year 1953. The attitude of members of the government continues favorable, and all important business and labor organizations have already endorsed the movement. The Canadian Standards Association is considering the proposals made by the International Standardization Organization to bring the subject of calendar reform into their orbit, a proposal which has already been endorsed by their French affiliate and several other groups. . . . The year has been occupied with the usual campaign of addresses and service to press and radio. An article in *Canadian Business* has proved very influential; five hundred copies were requested by the new Australian committee for circulation there. . . . Government officers in Ottawa continue to maintain a favorable attitude in international forums; unfortunately Canada is not currently represented in ECOSOC. . . . Early in the year, the Chamber of Commerce of Canada presented to the Canadian government as a "policy declaration" its request that The World Calendar should be initiated through the United Nations. . . . The Canadian section has throughout the year maintained a lively cooperative contact with London and Australia.

On 15 December the Canadian section presented a Memorandum to the Honorable Lester Pearson, Secretary of State for External Affairs, summing up the history of the calendar reform movement in Canada. It called attention to the fact that Canada was

one of the first nations to be recorded at an international meeting as favorable to revision of the calendar. This was at the League of Nations in Geneva in 1931. (Answering a question in Parliament, in February 1947, the Right Honorable Louis St. Laurent stated that Canada had supported in principle a perpetual calendar.) At the United Nations in 1949, calendar reform was placed on the provisional agenda of the General Assembly by Panama, but was removed from the agenda by a tie vote in committee. Canada was one of the four nations (with China, Chile and Venezuela) which voted to retain the subject on the agenda. Now the subject has again been put before the U.N., this time by India. Canada, it would seem, has good reason to support the request of India.

China. In Formosa (Taiwan), the Chairman of the Chinese Calendar Reform Committee, Dr. Chu Chia-hua, continues to direct an active propaganda for The World Calendar. As president of the Chinese Association for the United Nations, his influence and prestige is highly important. From the world-wide viewpoint, he suggests in his report, there is urgent need for more publications on calendar reform. Not enough has yet been done to acquaint the public with the aim we are heading for. It seems quite necessary that a series of systematic studies be made available and translated for international distribution, in order to remind all peoples that the need for such a reform is universal and that an improved calendar will benefit everybody.

Costa Rica. The Ministry of Foreign Affairs has shown a renewed interest in calendar reform. During the summer of 1953 the Foreign Minister, Fernando Lara, referred the subject to the Geographic Institute, the head of which (Dr. Federico Gutierrez) has been for many years an enthusiastic advocate of The World Calendar. On the latter's recommendation, the Minister has asked the Public Education authorities to make a formal presentation of the subject before the National University. . . . Literature in English on calendar reform is available through the daily *Libre Prensa* and the popular weekly *Mujer y Hogar*. A Spanish book on calendar reform, published recently in Panama, is displayed at the National Library by the director, Don Julian Marchena. There has lately been some favorable discussion in the press and on the radio. It is expected that the new President, José Figueres Ferrer, will take some action during the coming year.

Denmark. Informal discussions of calendar reform were held in Copenhagen during the August visit of James Avery Joyce, international liaison officer of The World Calendar Association. He conferred at some length with the government's adviser on calendar reform, who is also its UNESCO delegate and therefore fully familiar with international procedure in matters of this kind. There is not yet any organized movement in Denmark on behalf of calendar revision. The Copenhagen newspapers announced in the early summer that a prominent industrialist had made a move in that direction, initiating a correspondence with the International Standardization Organization and with the Secretariat of the United Nations. Apparently there have been no further developments in his campaign. However, qualified observers are confident that Danish delegates at this year's U.N. meetings will be sympathetic.

France. Inclusion of calendar reform in the program of the International Standardization Organization was urged at Geneva this year by its French member, AFNOR (Association Française de Normalisation). At the same time, AFNOR emphasized its position by electing The World Calendar Association to honorary membership.

Abbé Chauve-Bertrand, who for thirty years has been France's leading expert on calendar reform, has retired from active work, but will still be available from his "retreat" in southern France for consultation on important matters connected with official or ecclesiastical discussions of The World Calendar.

Throughout the year 1953 the French committee maintained a close contact with the British World Calendar Association, whose honorary secretary, James Avery Joyce, made several visits to Paris for conferences on international subjects.

Professor Joseph Girard of the Sorbonne presented calendar revision to the September Congress of the International Institute of Statistics in Rome. . . . One of the most prominent Protestant clergymen in France, Pastor J. Jézéquel of Pau, published a scholarly

treatise on calendar reform in the quarterly *L'Amitié Internationale*, organ of the Universal Alliance for World Friendship through Religion. . . . The *Christmas Annual* published by the graduates of the Ecole Boulle (decorators) is devoted to the subject of "Time," and includes a discussion and endorsement of calendar reform.

Germany. Formation of a German committee on calendar reform has been under way since November. Important leaders in industry, trade, communications, science and education have been invited to join the proposed committee. The movement has the approval of Abraham Frowein, who formerly was an eminent international leader in the cause, but who has now retired from business and organizational activity, having celebrated his 75th birthday on 19 September 1953. . . . There was a strong movement for calendar reform in Germany twenty years ago, which spread out and received part of its impetus from Dr. Rudolph Blochmann of Kiel, who unfortunately died of heart failure as a consequence of air raids in 1944; at that time the German calendar committee had an active membership of about 1,000.

Greece. Since 1937, Greece has been included among the governments which actively support calendar reform at all international meetings. The official position remains exactly as it was expressed in its communication to the League of Nations in August 1937: "The Greek government is in principle favorable to calendar reform." Coupled with this long-standing support is the declaration of the Greek Orthodox Church, dating back to 1931, when the Oecumenical Patriarchate declared itself in agreement with The World Calendar plan, a position which has been repeatedly re-stated since that time.

Haiti. An official statement from the Foreign Office in June gave information that "the important question of calendar reform is again being studied," with a view to presenting The World Calendar for endorsement by the Tenth Inter-American Conference of the Organization of American States, to be held in Caracas in the spring of 1954.

India. The positive attitude of India in regard to calendar reform culminated in October, when the government presented to the United Nations a "Memorandum on the Question of World Calendar Reform," urging that "The ideal of the whole world is to have a logical and perpetual calendar to replace the present Gregorian Calendar." The Memorandum, in six comprehensive sections, is a supporting document for the India government's motion to place The World Calendar on the agenda of the July meeting of the U.N. Economic and Social Council.

India's action at the U.N. is the direct result of recommendations made by a Calendar Reform Committee appointed by Prime Minister Nehru in 1952, under the chairmanship of the distinguished scientist, Professor M. N. Saha of the Institute of Nuclear Physics in Calcutta. The committee, after exhaustive preliminary studies, held a plenary meeting for three days in February. Its conclusions were promptly presented to the Prime Minister and action followed without delay at the United Nations.

A program of procedure for the July meeting of ECOSOC was being planned in Delhi at the year-end, with the advisory assistance of James Avery Joyce, honorary secretary of the British Section of The World Calendar Association.

An interesting corollary to the official activities centering in Delhi was the emergence in Hyderabad of a spokesman for calendar reform among the Moslem countries. This authority, Dr. Hashim Amir Ali, dean of agriculture at Osmania University, made a trip to the United States during which he held several meetings on calendar reform—in New York, Princeton, Chicago and other cities—and conferred extensively with the headquarters officials of The World Calendar Association. His studies in the application of calendar reform to Moslem countries were reinforced from Delhi by a statement from the Minister of Education, Maulana Abul Kalam Azad, speaking on behalf of the Moslem population of India: "The universal calendar as proposed by The World Calendar Association is very useful indeed, and no religious question arises in this respect against its adoption." Dr. Ali's activities, which at the end of the year included conferences in Delhi and other important centers, will continue in 1954 with visits to Moslem countries which are neighbors of India.

Iran. Although the Moslem countries of the Middle East are in continual difficulties with the wandering lunar calendar which they adopted after the death of Mohammed, there have been few attempts to correct or revise it. In recent times, Iran is the only Moslem state where a revised calendar has actually been legislated. This was done about 30 years ago by Riza Shah Pahlevi, and his rather laborious revision is still the legal calendar of Iran. Some highly interesting discussions of this situation and its bearing on the current international movement are expected to take place in Tehran early in 1954, when Dr. Hashim Amir Ali of Osmania University (Hyderabad, India) will visit Iran. As a leading Moslem expert on calendar matters his advice will have an important bearing on the official attitude of the Iranian government. He is a supporter of The World Calendar, and regards its adoption as specially important to Moslem countries.

Ireland. The proposed Irish Association for Calendar Reform is still in process of organization, but it is already active. For the time being, it calls itself a "study group," and it is receiving considerable correspondence not only from various parts of Ireland but also from countries as distant as Australia and Egypt. The temporary secretary, Professor John J. O'Meara, writes: "Interest has increased, due partly to a series of articles published in one of the most influential newspapers. These articles were the subject of editorial comment in another paper, and there followed a general correspondence in the public press. As a result, the Dublin Rotary Club invited the secretary of the British association for calendar reform to address one of their meetings. His speech aroused a lively discussion and there were full press reports. It was decided then that a steering committee should be formed to organize an Irish association and to insure that such an organization should be truly representative of all professions and callings, including the Church, the Law, Education, Business, Civil Service and other circles."

Italy. Despite many years of quiescence due to war and postwar difficulties, the Italian National Committee on Calendar Reform still retains its identity under Professor Amedeo Giannini and his son-in-law. The latter finds a special interest in calendar reform because he is a Moslem and understands how important this movement is to the 300,000,000 people who use the lunar calendar of Mohammed. The latest brochure published by the Italian committee is more than a dozen years old, and nothing more recent is available in the Italian language. In English, however, the quarterly issues of the *Journal of Calendar Reform* have a fairly wide circulation in Italy and are found in all important libraries. Because Italy is not yet a member of the U.N., its favorable attitude toward a revised calendar is not likely to play an important part in current legislative programs.

The Italian committee received a visit in November from Dr. Hashim Amir Ali who was in Rome for a United Nations meeting. He is an educator from Hyderabad, India, and a leading Moslem authority on calendar reform. During his stay in Rome he conferred with the India Ambassador, Mr. B. R. Sen, who will probably be in charge of calendar matters for India at the July meeting of the U.N. Economic and Social Council in Geneva.

At the Vatican, calendar reform is being re-examined. According to a statement issued through the Apostolic Delegate in Washington, "the Holy See now has the question under study and will make known its conclusions in the matter at the proper moment."

Japan. The Calendar Association of Japan, with headquarters in the Osaka Municipal Planetarium, continued its activities throughout the year. It distributed widely a brochure entitled "The Main Object of the Calendar," by Dr. Churyo Noda, vice-president of the Association. Contacts were established with representatives of the Japanese Chamber of Commerce and the International Chamber of Commerce. In another series of conferences, the subject of calendar reform was discussed with a committee of the Japanese Diet. There were also talks with the Standardization Department of the Japanese government in relation to inquiries received from the International Standardization Organization in Geneva.

Calendar publishers from various parts of the country attended a meeting at Ohmi

Shrine, near Kyoto, on 28 June, and organized a Calendar Study Association which includes in its membership several representatives of the calendar reform movement.

A member of the Japanese committee, Mr. Sadanobu Inoue, returned from a visit to the United States, during which he conferred several times with the officers of The World Calendar Association in New York City. His return was the occasion for a special meeting at the Osaka Planetarium, where he reported on his trip and projected interesting photographs he had taken.

It is the conviction of the Japanese Association that public opinion is increasingly informed regarding calendar reform, and that both people and government are generally favorable to the aims of The World Calendar Association.

New Zealand. Dr. I. L. Thomsen of the Carter Observatory in Wellington is preparing a series of newspaper articles for the New Zealand newspapers on the subject of calendar reform. Both in press circles and in official channels, the articles written during the year by the British Astronomer Royal have been widely circulated and have had an important influence, augmented by the good news from India and the sustained activities of the British World Calendar Association.

Nicaragua. Four lectures on calendar reform were delivered at the National University by the Vice-Rector, Dr. José H. Montalvan, as follows: 18 April: Need for a New Calendar; 16 September: Fundamentals for the Adoption of a Revised Calendar; 22 October: Inconveniences of the Present Calendar; 18 November: Progress Toward Adoption of a More Stable Calendar. . . . Dr. Montalvan also formally delivered to the government of Nicaragua a request that it instruct its U.N. delegation to support the action of India at the ECOSOC meeting in Geneva.

Norway. Members of the Norwegian Parliament and other leaders received this year a formal presentation of calendar reform in a brochure printed by the Norwegian affiliate. Its purpose was to bring them up to date on a project which they have always supported in international conferences on the subject. Several of the Norwegian newspapers commented on the matter and gave considerable important space to The World Calendar. . . . The professor of astronomy at the University of Oslo has shown a renewed interest in the subject of the calendar and has been in correspondence with the committee.

Panama. Dr. Juan Rivera Reyes, President of The World Calendar Association of Panama, was in New York in October, as Panama delegate to the United Nations General Assembly. He made one of the important speeches of the month, dealing exhaustively with the question of charter revision. During his stay in New York City, he had several conferences on calendar reform, and discussed the subject with members of other delegations from the viewpoint of practical legislative processes. In these matters, he cooperated effectively with James Avery Joyce of London, liaison officer of The World Calendar Association. The official attitude of the Panama government in favor of calendar revision is long established and will continue in any forum where the subject is raised.

Peru. In Lima, the Peruvian committee has kept in touch with the Ministry of Foreign Relations, and has also contacted all other South American and Central American committees with a view to cooperation in presenting The World Calendar at the coming conference of Inter-American States at Caracas, as well as in the procedures at the United Nations. Peru has been a consistent supporter of The World Calendar in international gatherings for the past fifteen years.

Philippines. Active educational work has been done throughout the year by the Philippine committee, with special emphasis on religious contacts, which are very important in this country. Many inquiries have been received and answered as to the precise status of the proposed calendar reform in the United Nations. The daughter of the chairman, Ramon Caro, Miss Isabel Caro, visited New York City in the early autumn and had a pleasant discussion of the world situation with officers of The World Calendar Association.

Russia. The first official expression of support for calendar reform from the U.S.S.R. came in July at the Geneva meeting of the International Standardization Organization.

One of the subjects for discussion at these sessions was The World Calendar, on which the principal speaker was James Avery Joyce of London. Mr. Joyce's remarks, dealing with reasons for placing calendar standardization on the regular program of the I.S.O., were followed by an approving speech from the Russian delegate, M. Igkourakov. Indications that his attitude had official sanction appeared a few days later in the Soviet newspapers *Pravda* and *Izvestia*. There was further confirmation at the United Nations in November, when the Russian delegates discussed the matter informally with representatives of India, England and the United States. . . . An American authority on Russian affairs made this comment: "Russia is interested in calendar reform for practical reasons of her own. Great stress is placed by Soviet economics today upon improved planning and statistical services, and in studying the problems of economic planning the Russians have probably found calendar reform advantageous. A combination of factors appears to have swung Russia into the growing list of supporters of calendar reform. Whether the Soviet will go beyond its present cautious endorsement of study of The World Calendar proposal remains to be seen."

Sweden. There have been increased activities regarding calendar reform in Sweden during 1953. These have centered around the interest shown in the subject by Dr. Hilding Törnebohm, head of SKF, the Swedish Ball Bearing Company. Early in the year, Dr. Törnebohm gave a lecture at a Rotary meeting in Gothenburg. This received wide comment in the press. About the same time a comprehensive "Appeal to Parliamentarians" was distributed to members of the Diet, editors, educators and industrialists. In August Mr. James Avery Joyce of London, representing the British Section of The World Calendar Association, spent several days in Stockholm and conferred particularly with Mr. Thore Petersson of the Ministry of Education. It is this Ministry which in Sweden deals with calendar matters, in liaison with the Ministry of Commerce. Mr. Petersson is the chief Swedish delegate to UNESCO, and will act in an advisory capacity on calendar matters with the Swedish delegation at ECOSOC. He is well informed on all phases of calendar reform, and sympathetic with the proposed international action.

Switzerland. Geneva was the scene of many international conferences during 1953. At several of these, The World Calendar Association was represented and the cause of calendar revision was presented. Perhaps the most important, from this viewpoint, was the meeting of the Council of ISO (International Organization for Standardization), which is considering the motion of its French member to place "standardization of the calendar" on its regular program of activities. A questionnaire on this motion has been sent to all its members, but insufficient replies have thus far reached the secretariat to enable a firm conclusion. The Council meeting was addressed by James Avery Joyce, international liaison officer of The World Calendar Association, and his appeal for a standardized calendar was supported by strong statements from the French delegate and from the representative of Soviet Russia. Mr. Joyce also attended meetings of the U.N. Conference of Non-Governmental Organizations and of ECOSOC, the Economic and Social Council of the U.N., with its numerous committees and sub-committees. . . . An important Swiss business magazine, *Der Organisator*, published an informative article on calendar reform.

Turkey. Dr. Hashim Amir Ali of India, leading Moslem proponent of calendar reform, stopped over briefly in Istanbul in November on a trip which included similar stops in Beirut, Baghdad and Tehran. In each of these cities, he laid the ground for more extended visits early in 1954, when he will confer on calendar questions with groups of Moslem leaders from each country—Turkey, Lebanon, Syria, Iraq and Iran.

United Kingdom. The British Section of The World Calendar Association celebrated its first anniversary on 5 May 1953, at a meeting in Committee Room No. 12 of the House of Commons. The presiding officer was Lord Merthyr and the principal addresses were by Peter Freeman, M.P., and James Avery Joyce. Mr. Freeman discussed the entry of India into the international crusade for an improved calendar. He is one of the leading parliamentary experts on India, for many years head of the India League and author of a standard book, *Our Duty to India*. He said in part: "Calendar complica-

tions are an old story in India, which currently has more than thirty different calendrical systems in active use—a situation which is chaotic and intolerable. This is one of the numerous national problems which Prime Minister Nehru has undertaken to solve, and he proposes to do it on an international basis, by moving at the United Nations for world adoption of The World Calendar.”

Mr. Joyce’s address was an historical sketch of the development of calendar reform on the international level during the past forty years. One of the pioneer bodies seeking international action was the International Chamber of Commerce, which began hammering at this subject during its London session in 1910. It continued its campaign at the Boston Congress in 1912, and at Liège in 1914 it passed emphatic resolutions urging a revised calendar. After World War I it continued its crusade at the London conferences in 1921, demanding that governments convene an international congress to study the subject. Again in 1923 at Rome, in 1925 at Brussels and in 1929 at Amsterdam, the International Chamber called on the League of Nations to set up the necessary machinery for dealing with calendar revision. Its twenty-year campaign, reinforced by similarly urgent demands from bodies like the International Astronomical Union, resulted in the 1931 conference called by the League of Nations, after a great deal of preliminary research by the League’s Committee of Enquiry. Subsequent activities included the initiative taken by the International Labor Organization in 1936 and 1937, when a draft convention in support of The World Calendar actually received the favorable votes of 14 governments. All this groundwork led to the present status of calendar reform at the U.N. As Trygve Lie said in his 1947 report: “The 14 years of work by the League of Nations on calendar reform achieved considerable results. Although originally there were several hundred proposals for revision, two main types were eventually isolated, and finally one single calendar was submitted to the Council for approval.”

Mr. Joyce summed up the results of his visit to the U.N. in New York with these words: “I think I am justified in predicting action shortly. At the General Assembly meetings I found a surprisingly solid backing among a large number of delegations, favoring the inclusion of this item on the official agenda. In my considered opinion it will not be long before the moment arrives when this important step will be taken.”

Five other meetings were held during the year, all of them taking place in the House of Lords committee rooms. They were called for January, March, May, July and December. The latter meeting occurred after Mr. Joyce’s return from another visit to the United Nations, and at this time, the action of India justified fully the predictions which Mr. Joyce had made in May.

In the meantime, Mr. Joyce had attended as an official observer several important international meetings in Geneva, Paris, Copenhagen and Stockholm. These included the sessions of the U.N. Economic and Social Council, the Congress of U.N. Non-Governmental Organizations, the Copenhagen Congress to consider U.N. Charter Revision and the annual Council of the International Standardization Organization.

Meanwhile the London office had taken up calendar matters with delegates to the International Chamber of Commerce convention in Vienna in May. It had also sent a representative to Dublin, to assist in the organization of an Irish committee for calendar reform. It had corresponded with Australia and South Africa regarding similar new groups in those countries.

The London office supplied speakers for meetings in various parts of the British Isles. It conferred with many interested groups, representing business, education, religion and science. It sent the Astronomer Royal to New York as its representative, to speak before a scientific audience at the Hayden Planetarium and to confer informally with an important group of U.N. delegates.

The press officer of the British Section, Mr. Harold Watkins, was active with newspapers, magazines, and radio. He also found time to write a book on calendar reform, which is being published in January under the title, *Time Counts*. The British publisher is Neville-Spearman, and simultaneous publication in America will be by the Philosophical Library.

Two new members of the working committee of the British Section are Sydney Walton, a well-known writer, and S. J. Noel-Brown, industrial consultant. One of the

active committee members, J. Arthur Rodwell, was summoned to Buckingham Palace during the coronation ceremonies to receive from Her Majesty the decoration of the Order of the British Empire.

Yugoslavia. Organization of a new committee on calendar reform in Yugoslavia is being discussed, to take the place of the group which became inactive after the death of the chairman, Mr. George Curcin, several years ago. Enthusiasts in the Belgrade area include Rear Admiral Mariasevic, now living in Zemun, ten miles from the capital. At Novi Sad, fifty miles up the Danube, are Bishop Irenäus, head of the Orthodox Church, and Dr. Nikola Ygnjatovic, president of the Court of Appeals. The attitude of the Yugoslav government has been definitely favorable to calendar reform since the first League of Nations conferences in 1931. In fact, the Preparatory Committee for the 1931 meetings was presided over by a Yugoslav diplomat, M. Djouritchitch, who had as his technical adviser M. Vasa Yovanovitch of the Belgrade Chamber of Industry.

United States. The most important event of the year, from the viewpoint of international progress toward the goal of calendar reform, occurred on 6 April, when the United Nations officially registered The World Calendar Association, International, as one of the non-governmental organizations affiliated with its Economic and Social Council (ECOSOC). This formal recognition marked a new and significant step in the international pathway leading to decisive action for an improved calendar.

As one of the carefully selected non-governmental organizations known as NGOs, the Association now enjoys consultative status with the U.N. and becomes a recognized part of the U.N. operation. Under the U.N. Charter and Statutes, this consultative status is arranged "for the purpose of enabling the Council to secure expert information and advice from groups having special competence in their field, and on the other hand to enable organizations which represent important elements of public opinion to express themselves."

Since 6 April The World Calendar Association, International, has had representatives at three NGO conventions, one in Geneva and two in New York City. It has also attended various allied meetings and has been in continuous contact with the U.N. secretariat and with delegates of member nations, not only in New York and Geneva, but also in London, Paris, Stockholm, Copenhagen, Rome, etc. Its international liaison officer, James Avery Joyce, came from London to New York for the autumn sessions of the General Assembly. He also attended U.N. meetings in Switzerland and Denmark, and at the year-end was preparing to go to India for important conferences with the U.N. delegations from that country. Another member of the British Section, Sir Harold Spencer Jones (British Astronomer Royal and head of Greenwich Observatory), was in New York City at the time of the General Assembly sessions, and was the guest of the India delegation at a luncheon where calendar reform matters were discussed with delegates from England, Russia and the United States.

Dr. Ali, a Ph.D. from Cornell University and since his graduation a professor of agriculture at Osmania University (Hyderabad, India), was in the United States most of the year on grants from the Fulbright and Ford Foundations. As the leading Moslem authority in India on calendrical matters, he has for some time been engaged in an international study of the problem of introducing effectively The World Calendar in the realm of the Crescent. A summary of his views, published in the *Journal of Calendar Reform* in June, was submitted for criticism to important scholars in Moslem countries, Egypt, Iran, Iraq, Turkey, etc., with a surprisingly favorable response. During his stay in America, he attended important conventions of Arab scholars at Princeton and Chicago; on his return trip to Hyderabad, he made stops in Rome, Istanbul, Beirut, Baghdad, Tehran and Delhi for conferences with calendar groups in those cities. During the early part of 1954 he will make similar visits to Egypt, Saudi Arabia and other parts of the Moslem world.

A pleasant feature of the year's work was the completion of The World Calendar Exhibit at the Hayden Planetarium in New York City. The Exhibit was formally opened on 4 December with an address by Sir Harold Spencer Jones, the British Astronomer Royal, who made a quick round trip by air from London for this purpose, and incidentally achieved something of a world's record by appearing on eight radio and television programs

in a period of only about forty-eight hours. At a dinner preceding his lecture, a dozen prominent American scientists met to honor him and to discuss calendar reform. Astronomers, of course, have always been in the forefront of calendar matters, since the days of Babylonia, Phoenicia and Egypt.

Throughout the year the headquarters staff of the Association has been occupied with preparation of material to assist the new committees in India and Australia in their work. The excellent progress made by both committees has been an important feature of the year 1953. At the same time close contact has been kept with the affiliates in Central and South America where in many cases the situation is that expressed by the Uruguayan affiliate: "Our government has declared in favor of calendar reform; our official representatives are fully informed and ready to give full cooperation; thus we are in the position of standing by, waiting for the rest of the world to catch up."

There have been a few changes in the membership of the U. S. Advisory Committee. We have lost three important members in the deaths of Gano Dunn, eminent industrialist and engineer; Dr. Robert Millikan, famous physicist who was a Nobel Prize winner in 1923, and John J. O'Neill, Science Editor of the *New York Herald-Tribune*. In their places we have added Paul Talbot Babson, head of the United Business Service of Boston; Dr. Wagner Schlesinger, director of the Adler Planetarium in Chicago, and Q. Forrest Walker, economist for R. H. Macy & Company, New York City.

Publications activities in New York have included four issues of the *Journal of Calendar Reform*, two editions of our basic pamphlet, *Improve the Calendar*, and a dozen other pamphlets—including the first two issues of a series designed to document U.N. action.

Printed material in bulk was supplied during the year to schools, colleges, conventions and special groups of various kinds. Individual requests for information have been larger than usual. Service to press, radio and television has continued to be an important activity. Material for speakers has been distributed and the roster of speakers available for addresses before forums and clubs has been active. Mr. Edward F. Flynn of St. Paul heads the list of speakers, as usual, in the number of addresses made. Other speakers have included Allan P. Ames of Pensacola, Reverend John R. T. Hedeman of Baltimore, Commander William A. Mason of California and Jacob E. McColly of Pennsylvania. Miss Achelis has spoken on several occasions, notably at the American Museum of Natural History in New York City and at the Astronomical Society in New Haven. In Philadelphia the Fels Planetarium gave five lectures daily throughout the month of September on the subject "The Calendar, Man's Measure of Time."

OBITUARY NOTE

PARIS.—Paul-Louis Hervier, chairman of the French World Calendar Committee, died on 8 March. One of France's most distinguished journalists, he had been the active head of the calendar reform movement in this country for nearly 25 years. Educated in France and England, he was Secretary General of the Paris *Intransigeant* during the first decade of the century, when that newspaper boasted the greatest circulation of any periodical in the world. For several years he did a daily short story for *Intransigeant* and other French newspapers, and authored several books in English and French. In World War I he served as a liaison officer with the British and American armies. His qualities of courage, integrity and common sense won him many American friends during this period. After the war, he worked with American film companies as scenarist, publicist and librettist. About 1931 he became interested in calendar reform, attending many international conferences and collaborating with Abbé Chauve-Bertrand, Senator Godart and other French leaders of this cause. During the past year he had published two successful novels.

INDIA'S CALENDAR HORIZONS

By Dr. Hashim Amir Ali, Osmania University, Hyderabad

Hyderabad, largest and most populous of the Indian states, operates under four different calendars. This article, abstracted from a monograph published in India, gives a unique philosophical view of the whole calendar situation. Dr. Ali, in 1946, initiated a successful movement for the reform of the local Fasli calendar, synchronizing it with the Gregorian system.

CALENDARS of India are as numerous as the castes, tribes and languages to be found in our vast sub-continent. Those which can be classed under the generic term "Hindu" are based on astronomical calculations of an intricate nature, and any attempt at describing them briefly is as futile as the effort to define clearly the infinitely varied patterns covered by the term Hinduism itself. Moreover, there are my own limitations of technical knowledge which make me hesitate to deal with the subject. But I shall do my best to present what I have been able to gather in a manner which will give those who do not possess it, at least a hazy idea of the subject.

The ancient Hindus are the people credited with the invention of the Zero, which constitutes the basis of all modern mathematics and astronomy. We assume also that the measurement of time, which is the function of all calendars, was carried on in India earlier than in any other country.

It has been said that the legend of Shiva and Parvathi is itself a symbolic representation of time and the calendar. Shiva, the spirit of Time, was in a coma until Parvathi, the calendar, was born.

And it was only when he was enmeshed in the charm of Parvathi that he began to dance. The loss of Parvathi and the going of Shiva into a swoon is supposed to represent a period in which the calendar was lost to the human race. These analogies can be expanded. But my purpose is served if I have conveyed some sense of the venerable traditions and philosophical attitudes which envelop time measurement in our ancient land.

Coming down from the realm of fancy to the domain of facts and figures, one cannot help noting that very early calendar beginnings are also found in other parts of the world. Take for example the various eras used in different calendars. According to the Julian reckoning this is the 6667th year; by Jewish systems it is the 5714th; according to the Kali Yuga it is the 5052d. Another grouping of eras begins at about the same time as the Christian reckoning. The Japanese era makes the current year 2614; Buddhists call it 2497; Zoroastrians say it is 2342; the Greek era makes it 2266; the Sambat calendar says it is 2011, and the Saka year is 1876.

It is only the last two reckonings that concern citizens of Hyderabad, and my mention of the others has, I hope, served

to place these in proper perspective. What I wish to emphasize is that while the principles involved in Hindu calendars are of great antiquity, the eras themselves are not very old as eras go.

Chief characteristic of Hindu calendars, as distinguished from others, is their infinite intricacy. The basis of this intricacy is three-fold: First, the learned and philosophical Brahmins,* responsible for these calendars, seem to have had a passion for reconciling the irreconcilable. Second, they had only mathematicians and astronomers, and not laymen, in mind: the calendars of the Brahmins, in other words, were made by the Brahmins for the Brahmins. Third, they attempted to make the calendar such as to serve astrological purposes—another means by which their own indispenability for others could be established.

No one can deny that all Nature is based upon a single universal plan, and this hypothesis is sufficient for all theoretical purposes. Man's knowledge can never expand to the extent that it can reconcile completely divergent phenomena. To illustrate what I mean let me give a simple example. If only the earth could complete a cycle round the sun in exactly 360 days, how simple would calendar making become! It is those extra 5 days, 5 hours, 48 minutes and 46 seconds which have been giving the headache to humanity ever since it began to measure the length of the year. Now the solution adopted by the Europeans 2,000 years ago was one that any layman

could follow without the help of astronomy. They gave to each year 365 days and added an extra day every four years—in other words, they assumed the year to measure 365 days 6 hours. This arrangement served all practical purposes for 1,600 years. When the extra minutes and seconds accumulated to a stage of inconvenience, Europe made another change prescribing the omission of a leap year every 100 years. And this has postponed any appreciable divergence for several thousand years. In other words, Europe had the common man in view and an organization to enforce a change.

The Brahmins of India did nothing so simple. Their year had to correspond exactly with the full cycle of the sun starting at a fixed point and returning to it. And since such a fixed point had to be decided upon they took the help of the stars. So much so that their so-called solar calendar became, in fact, a sidereal calendar.

Similarly, they were not satisfied with dividing the solar year into twelve more or less arbitrary periods of 30 days and 31 days. Their "months" had to be exactly equal to the period which the sun takes to pass through each of the twelve divisions into which the Babylonians had divided the heavens—these solar "months" thereby extending to 29 days in some cases, 30 in others and even 32 in one month. Even their "day" could not begin at sunset or sunrise or noon or midnight. It had to begin or end precisely at the moment when the exact fraction of the year closed whether it was at 9:45 a.m. or 2:47 p.m.

To come down to less perplexing statements, however, it might be said that there are mainly two types of Hindu cal-

*The Brahmins constitute the highest or sacerdotal caste among the Hindus, whose chief duty is the teaching of the Vedas and the performance of religious ceremonies.

endars—one based on the changing relations between the earth, sun and stars, the other taking into consideration the phases of the moon also. The latter, however, has gained so much acceptance that, except in Bengal, the purely solar reckoning serves mostly as a background for the luni-solar calendars which underlie the *Sambat* era, more common in North India, and the *Shaka* era current in the South.

The “month” in the luni-solar calendar is naturally the period between two new moons. But this “new moon” is not the delicate crescent which Muslims strain their eyes to see. That would give rise to too crude a calculation. In the Hindu calendar “New Moon” means the exact moment when sun and moon have the same longitude, a somewhat abstruse phenomenon which takes place at some moment in the middle of the entirely moonless night. This period between new moon and new moon, covering about $29\frac{1}{2}$ days, is divided exactly into 30 divisions of time known as *tithis*. The duration of each *tithi* therefore is slightly less than a day of 24 hours. The “dates” shown in Hindu calendars are thus not the serial numbers of days as we understand them but the serial numbers of these *tithis* and represent the one current at sunrise. In other words a “date” shown in the Hindu calendar does not necessarily extend to the next sunset or sunrise. It may even happen that, at the time of a consecutive sunrise, not the next but the *tithi* following the next is current. In such cases a single day is found to have two *tithis* or “dates” marked against it.

The same principle of occasionally taking two steps against the other’s one is

observed in making the shorter lunar year keep pace with the longer solar year. The mean duration of a lunar month is about $29\frac{1}{2}$ days and hence lunar months consist of 29 or 30 days. A lunar year of twelve lunations is about 11 days short of the solar year. Therefore, whenever two new moons occur within the time space of a single solar month, the lunar month, beginning with the first of these new moons, is regarded as the extra month termed *adhika*, while the month beginning with the second of the new moons is regarded as the *nija* or real month. Hindu festivals are always observed in the *nija* month.

One other item given in our calendars, the *karti*, needs some explanation. Long before the Hindus borrowed the twelve divisions of the Zodiac from the Babylonians they had themselves classified the heavens into 27 divisions, each one measuring $13^{\circ} 20'$. For the purpose of astrology they had been mostly concerned with the passing of the moon through these 27 divisions which they called *nakshatras* and their almanacs still show in which of these *nakshatras* the moon is at each sunrise. The period taken by the sun to pass through each of these 27 *nakshatras*, or divisions of the ecliptic, is known as the *karti*. Dividing the solar year into 27 instead of twelve divisions as the months do, the system provides a more accurate description of the seasons. For example the entry of the sun in the *Rohini Karti*, is at once accompanied with southern winds and its entry into the *Mrigasira* announces the *Mirag* or breaking of the monsoon.

The above explanation is the simplest that I can give and those already conversant with the systems have probably

been able to follow it. But I dare not hope that I have made myself quite clear, simply because the subject involves too many fractions and details.

But let me not leave the impression that these attempts on the part of the Brahmins of old to reconcile the seemingly irreconcilable have been futile. Our knowledge of the universe might have been much less than what it is now if they had been satisfied with what merely served practical purposes. We might grumble at the difficulty in understanding them, but there can be no doubt that, from the point of view of correctness and exactitude, the Hindu calendars are by far the nearest approaches to the actual machinery of astronomical phenomena governing life on our planet. The only fault of the Hindu calendars is that they are unintelligible to the common man.

THE "CHRISTIAN" CALENDAR

The so-called Christian calendar has exactly the opposite characteristics of those which I have described in dealing with the Hindu calendar. It is not without inconsistencies and divergencies from Nature and yet it has managed to muddle its way to each and every corner of the globe merely because it was simple, intelligible and practicable to the common man. It serves all practical purposes.

The very first observation to be made regarding the Christian calendar is that it is not "Christian." It originated centuries before Christ and had its beginnings in pagan Rome and ancient China where the intercalation of a day every four years was in vogue thousands of years before the Christian era. Julius Cæsar, who really made it what it is, pre-

ceded Christ by more than two generations.

It is called the "Christian" calendar because the Christians of later centuries appropriated it for their own; and, leaving the Cæsars to the minus period "Before Christ," started a positive series of years with the year in which Christ was supposed to be born. But subsequent research has established the fact that Christ himself was born in the year which, according to the calendar already existing, was either 4 B.C. or 7 B.C. Even the date was more likely 9th December instead of 25th.

The next anachronism of the Christian calendar is with regard to its New Year. The words September, October, November and December clearly indicate that these were originally the seventh, eighth, ninth and tenth month respectively. Going backwards in this series one would have March as the first month; and that would be in keeping with the immemorial custom of beginning the year with Spring.

The answer to the question as to how the Christian year began to commence with the 1st of January is very simple. Nearly 1600 years after Christ, came the vicegerent of God on earth, known as Pope Gregory XIII. He was a very powerful Pope and he wanted the new year rejoicings to be close to the date on which the nativity of Christ was celebrated. Since the birth of Christ on the 25th of December is not an established fact he would have been wiser to have brought the Nativity celebrations closer to the vernal equinox. But the spring festival was a pagan custom and Christmas had already become associated with snow and hearth fires. So instead of changing the official birthday of Christ,

the New Year was shifted from March,* the time when all Nature rejoices, to January, a period when Nature is asleep. And Europe quietly obeyed the Pope in 1582 when the Renaissance had been preaching its gospel of intelligence and freedom for 200 years!

It is true that not all of Europe bent its knees immediately. For 200 years England resisted. But in 1752, the New Year in that country also was shifted to the end of Christmas week.

But this was not all that Pope Gregory did. His astronomers and mathematicians told him (or perhaps he himself realized as an astronomer) that owing to the addition of a day to every leap year during the preceding 1,200 years, Christmas did not correspond exactly to the winter solstice which had been fixed for it by the Council of Nicea in 325 A.D. So he proclaimed that 10 dates should be missed by calling the day immediately following the 4th of October the 15th of October. This regulation too, Christian Europe obeyed; and when England adopted the reform in 1752, the day following 2d September was given the date of 14th September. But Russia and other countries following the Greek Church resisted the change until as late as 1918.

Europe no longer worries about these arbitrary and unnecessary changes. What it does remember is the one sensible aspect of the Gregorian amendment—the provision that a day should not be added to the century year unless it were divisible by 400. It is this provision which

counteracts the excessiveness of intercalation brought about by the addition of a leap-year day regularly every fourth year. If Pope Gregory had only looked forward instead of looking backward, he would have brought forward the 1st of March, i.e., the new year, to the 11th of March, which then corresponded with the vernal equinox, instead of retarding the year so that the 21st instead of the 11th March began to correspond with that phenomenon of Nature.

These incongruities of the Christian calendar have not however escaped the observation of intelligent Europeans. The following passage from *Dreams of an Astronomer* by the French scientist, Camille Flammarion (1842-1925) is a discussion of conditions on the planet Mars:

"As in our case, there is no integral number of days in the Martian year. Perhaps their calendar has also been reformed several times without being made perfect. But let us hope they are not as stupid as we, with our months of 28, 29, 30 and 31 days, and with our three kinds of days—the civil day which commences at midnight, the astronomical day which commences the next midday and the naval day which commences the previous midday; we who waited thousands of years before we could fix an exact hour in Standard Time because we counted from conventional meridians and the various countries could not agree to a single meridian. Being probably more advanced than ourselves in its planetary age, Martian humanity is most likely more reasonable and is not mixed up with the littleness of frontiers, dialects, customs and national rivalries. For a long time already, no

*This also explains why February, being the then last month, had an extra day in every leap year. Logically with this change, December should have become the month having an extra day every leap year.

doubt, they form a simple unit. One may also suppose that they do not celebrate their new year festival amid the winter frosts, but in the hopeful days of the equinox."

This realization by a Westerner is not surprising. What is surprising is that such a remonstrance is so rare among the nations who have the reins of scientific discovery in their hand and who today claim to lead the world in thought and action.

And still more surprising is the fact that even The World Calendar Association, which has been clamoring for a more rational and practical calendar, seldom says a word about having the New Year related to the vernal equinox. Inertia is, indeed, not confined to India!

I have said that the Christian calendar differs most from the Hindu calendar in that, unlike the Brahmin system, this is a calendar for the common man. Therein, I repeat, lies its strongest and weakest point. As long as it meets his daily needs, the common man does not care whether his new year has any relation with geophysical phenomena. It is difficult to persuade him to adopt a change which he does not think essential for his routine existence. Only when the intelligence of the common man is raised to that of the Brahmins will the world have a calendar as fastidious as that of Aryavarta.

ALSO, THE MUSLIM CALENDAR

We have seen that the so-called Christian calendar is not really Christian. Something similar must be said regarding the Muslim calendar. It bears Mohammed's name and its era dates from the year of his *Hijrath* from Mecca to

Medina. But it originated five years after the great Prophet had passed away.

Its basic principle is that it is purely lunar, and the reason for this is that the Prophet at his Farewell Pilgrimage—only three months before his death—gave his followers two verses of the Koran condemning the haphazard intercalation of the thirteenth month in the existing tribal calendar. My position is that his meaning was misinterpreted, and that he really intended to suggest the adoption of the purely solar calendar which had been current among the Christians for the preceding 600 years.

This thesis, coming from a Muslim, might at first appear sacrilegious. But many intelligent and orthodox Muslims agree with me that the purely lunar Hijri calendar does not constitute a tenet of Islam and that there is no reason why its authenticity being questioned should be regarded as a criticism of Islam—the universal code for human life and action as enunciated through the great Arabian Prophet.

"There is no God but God and Mohammed is His Prophet." The implicit faith in this simple creed is enough, I believe, to make one both a Muslim and a striver after good. It is not necessary for a Muslim to add that "The lunar calendar is the only true calendar" or that "I believe in the Hijri calendar."

We all know that the Hijri calendar is based purely on the phases of the moon—the period between the *appearance* of one new moon and another being regarded as a month; and twelve such lunations as a year. This involves no calculation of any intricacy as in the luni-solar calendars of the Hindus; nor is it even necessary to remember the

number of days in each month by memorizing such stanzas as "Thirty days hath September." It is simpler than *A B C* and was entirely suitable for the illiterate Bedouins who had only to look at the clear sky of the desert at night to know the approximate date.

If only a year could consist of exactly twelve such lunations, this calendar would have been perfect. But, unfortunately, God did not ordain it that way and life on our planet, being guided as it is by the nucleus of our solar system, namely, the sun, refuses to be affected in any real sense by the moon, which is a satellite of the earth. The lunar year, as we all know, is entirely oblivious of the seasons and of the "year" observed by all Nature. And we have seen how others have taken advantage of both the sun and moon by adding a thirteenth month sometimes after two and sometimes after three years.

Now the fact that the month names of the Hijri calendar, *Moharram*, *Safar*, etc., existed even before the advent of the Arabian Prophet gives one the wrong impression that this purely lunar calendar of Islam existed also among the pre-Islamic Arabs from time immemorial. But the very names of these months suggest that they belonged not to a lunar but to a solar calendar or at least to one that was luni-solar. For example, the name *Ramazan* is derived from a word signifying intense heat, the word *Rajab* is connected with the harvest season for dates when their inflorescence had to be supported by forks stuck in the ground; *Rabi*, the word denoting the names of two months, is a common seasonal term even now. The word *Jamadi* signifies a season of stillness, and *Safar* is the month before the next growing season.

To suppose that any people, however ignorant, gave these names to purely lunar months when they knew full well that they would not correspond with the seasons signified by them the very next year, is to deny all logic in arriving at conclusions. No, these names prove beyond doubt that, whether the months actually continued to correspond to the seasons or not, they were intended to do so at the time the names were given. The beginning of each month with the new moon being also an established fact there is no alternative but to accept the thesis that the calendar of the pre-Islamic Arabs could not but have been a luni-solar calendar very much like, but not exactly the same as, the Jewish or Hindu calendars which still persist.

Going back from our own times to the time of the Prophet, in regular succession of the twelve lunar months, leads one, however, to the conclusion that *Ramazan*, signifying heat, corresponded with the cold season more or less throughout the 23 years of the Prophet's mission. This anomaly is explained by scholars as the outcome of the Arabs' habit of adding an intercalary month *regularly* every three years, a process which made the difference of a day every year and of six months in nearly 200 years. It was thus that the month, having a mid-summer connotation, gradually moved, through a slow evolutionary process, to fall in mid-winter. The evidence supporting this thesis is, at the moment, undeniable. But, somehow, I cannot make myself believe that a people who were sufficiently advanced to adopt intercalation could have been so stupid as to suffer this gradual and by no means imperceptible change. My own theory, which I hope one day to

support with evidence, is that the transposition of a mid-summer month to mid-winter was probably the outcome of a sudden change of the month of Hajj from the autumn to the spring and the consequent juxtaposition of the two halves constituting the Arab year.*

Be that as it may, the point we are concerned with here is that until the last year of the Prophet's life the lunar months continued to correspond more or less with the seasons because of the prevailing practice of intercalating a month every two or three years.

Unfortunately, another cultural pattern of the Arabs was interwoven with this practice of *Naci* or intercalation. This was the custom of regarding four out of the twelve as sacred months in which no war or plunder was allowed. The first of these four months was *Rajab*, which came in the part of the year when the harvests were ready and when plunder would be both uncalled for on the part of the plunderers and highly disastrous to those plundered. The other three months were grouped round the *Hajj*, a quasi-religious festival providing also for exchange of goods and the hearing of tribal disputes. To avoid quarrels on the way to Mecca, during the festival or while returning from the *Hajj*, a time when all were carrying goods and feelings also ran high, Arab society had made warfare unlawful in the months of *Zulqada*, *Zulhajj* and *Moharram*.

Unfortunately, the last two of these months, *Zulhajj* and *Moharram* were also involved in the system of intercalation—*Zulhajj* being the last month of the year which had to be repeated every two or three years, and *Moharram*, which had consequently to be pushed forward on every such occasion. Naturally, the problem often arose as to whether *Moharram* at such times was really sacred or not when a month after *Zulhajj* had already intervened. And this had always given the *agents provocateurs* an opportunity to lay the blame on those responsible for intercalation. Whenever the *Naci* occurred there were sure to be war and bloodshed.

During the 23 years of his mission, the Prophet of God had discouraged bloodshed except in self-defense. When, finally, after years of striving, he had succeeded in introducing order out of chaos, the two verses which are alleged to condemn and prohibit the practice of *Naci* (intercalation) were revealed during the last pilgrimage.

In these verses, great emphasis is laid on the fact that *the year of God* has always consisted of *twelve* months, thereby implying that the calendar involving the *thirteenth* month of intercalation is the cause of confusion and conflict and hence should be abandoned. The text lays much emphasis on the *twelve* months constituting *the year of Nature and of God*. Now twelve *lunations* as I have shown, do *not* cover the year of Nature and of God, so it is logical to assume that the verses suggest the adoption of a *solar* calendar in which the twelve months do conform to the laws of God.

Students of the Koran know that all the Prophet's injunctions regarding slav-

*Dr. M. Hamidullah, of the Osmania University, on reading this paper in manuscript, tells me that it is even possible, though not likely, that such a transposition took place during the brief all-round sway of the Fatimide dynasty which was notorious for its unorthodoxy. Like many other notable incidents in history, it is not impossible that the record of this also was lost in oblivion.

ery, drink, fasting and prayer were given first as hints and repeated gradually in plainer and more definite commands. The great Prophet passed away within three months after the Farewell Pilgrimage in which his utterance regarding the *Naci* had been made; and since the problem of *Naci* arose only once every two or three years, no occasion arose during this period for the amplification of his hint.

The purely lunar calendar became current in the Islamic camp during the period of turmoil and conquest following the Prophet's death. Intercalation of the thirteenth month had been condemned and so this intercalation was given up. But the fact that dispensing with this intercalation necessitated giving up the *lunar* calendar itself and, consequently, accepting the *solar* calendar in its place, was lost sight of. The measure implied in the two verses of the sacred Book was implemented only in part, and soon this half-measure became sacred.

One must also keep in mind the innumerable other and seemingly more weighty problems which arose in the years immediately following the death of the Prophet. Where was the opportunity for the great Omar, or the learned Ali, to attend to the intricacies of calendar reform among the mass of illiterate, half-baked, hordes of Muslims who had flocked to the standard of the great leader? Keeping order among them after their having acquired a taste for wealth was all that even Omar could do. And by the time Ali, too, passed away, the purely lunar Hijri calendar had acquired the prestige and sacredness of a religious injunction. Even a suggestion against its inadequacy was sacrilege.

But be its origin what it may, let us

see what advantages the Muslims claim for this purely lunar reckoning.

Looked at from one point of view this simple pattern had and still has many advantages. The chief advantage, for example, is that while all other calendars have been amended some time or other during the last 1300 years, the Hijri calendar has remained unaltered, for the simple reason that it did not lend itself to change. Such constancy, possible in no other means of calculation, is of great value to historians.

Another advantage of the purely lunar calendar is that it frees its followers, at least to a large extent, from the bonds of geography and climate. The two factors of climate and geography have always exercised so much influence on the mind of man that for many millenniums and even now the viewpoints of human groups have been circumscribed, making it impossible for them to regard mankind as a single family. The lunar calendar provides for a side-stepping from all issues involved in differences of longitude and latitude. It is this advantage which has sustained it throughout the centuries and which promises to sustain it for many more.

But these advantages, though real in a sense, do not, I am afraid, outweigh the disadvantages. Man, being a part of Nature, cannot in any real sense, be oblivious of his environment. In proportion to his doing so, he makes his life artificial and bare. His festivals lack the climatic associations which make those of others joyous. The *Hajj*, for example, involves the sacrifice of many animals; but, corresponding as it does now, with successive seasons, it sometimes entails their slaughter in the breeding season. The dis-

location of popular festivals is serious. The marriage seasons, according to the lunar calendar, often correspond with the rains, when festivities are damped by the monsoon. Fasts are distinctly healthy in the hot season when we need to eat less: but *Ramazan* revolves round the seasons and one has therefore to fast sometimes in winter when our bodies need more heat—sometimes in the rainy season, when digestion tends to be upset by the slightest change in diet routine.

Instead of uniting mankind into one, the lunar calendar serves to separate its followers from the rest of the world. No accommodation, for example, can be effected between the *'Ids* of Islam and the seasonal festivals celebrated by the rest of mankind in spring and autumn. *Moharram* sometimes collides with *Holi* and sometimes with *Dusserah*. The *'Id-ul-Fitr* is sometimes celebrated in Delhi on one day, in Bengal the next day and in Hyderabad on the day preceding. The Muslim world, following this calendar, and lying between the typical west and the typical east, constitutes a vast expanse of humanity relatively impervious to assimilation and change and therefore unable to bring together what lies on either side.

To the real student of history the lunar calendar is often very annoying. For when an event is narrated according to Hijri dates the reader gets no idea of the season then prevailing and hence cannot formulate a clear picture of the situation. The whole of Muslim history thus acquires a vagueness wherein one merely sees figures moving against a colorless background. The generally persisting difference of one or two days in the dates is extremely irritating to one who aims

at exactitude and accuracy. It is obvious that places with different longitudes and latitudes will often not agree in regard to the exact date when a new month commences, and that the lunar dates of any period of history, when the beginnings of lunar months were based upon the moon being actually *seen*, can never be taken as accurate.

AND FINALLY, A LOCAL CALENDAR

In my own state of Hyderabad, there is also a local calendar called the *Fasli*. It has its own era, its own New Year, its own date for inserting the leap-year day, and its own assortment of 30-day and 31-day months. Otherwise it has been brought into reasonable conformity with the Gregorian system. People say, "Yes, there is neither logic nor tradition nor uniqueness in the Fasli calendar, but all departments of our government have got into the habit of thinking in terms of the Fasli months and years: so any change would be unwelcome." There is such a thing as habit, which combined with social inertia, makes men cling to their handicaps, however heavy.

It is strange how the different characteristics of our four calendars—Hindu, Christian, Muslim and Fasli—depict the minds of the people among whom they prevail. The Hindu calendars are characteristic of the philosophical Hindu temperament, its hair-splitting subtleties, its supreme indifference to practical difficulties, its infinite soaring towards the absolute and its utter neglect of the common man. The Christian calendar, on the other hand, ignores the rocks of stupidity imbedded in its structure with a smugness equal to that which Christendom displays towards certain animistic beliefs. It does

not matter to the Christian, be he European, Indian or American, whether his New Year corresponds to a change in the solar system, as long as it commences at the same time throughout Christendom. He is reluctant to return the one extra day from August to February simply because it does not make much difference from a practical point of view. It is pragmatism he aims at and not logic. The calendar to the Christian is a means not an end.

Likewise the Hijri calendar is characteristic of the Muslim mind wherein orthodoxy rules supreme. As long as he believes that he is obeying the word of God it never occurs to the Muslim that he is perhaps misunderstanding it. The days of the early Caliphs are to him the golden age when ancient empires crumbled before the moral force of Islam. He does not stop to think that the age presented problems peculiar to a phase of human culture which no longer prevails. He tries to justify, through rationalization, even diametrically opposite tendencies that have existed during different periods of Islamic history. Deduction and not induction is still the sole basis of his logic. The reaction of some Muslims to the simple synchronization now taking place in the Fasli calendar is also illustrative of the same spirit of conservatism at any cost. Right or wrong, straight or crooked, ancient or recent, anything which is associated with his culture is to the Muslim equally sacred. Perhaps it is these differences in Christian, Hindu and Muslim attitudes of thought which make human life interesting. For if there were no such differences, life would be monotonously the same.

But if you look at all calendars to-

gether you will also see that they are like rivers flowing through time. If you analyze their contents you will find elements which they have carried down from various eras in man's history. Mixed up in their waters are sands even of different regions and here and there floating on the surfaces are found coffins of human efforts and corpses of royal vanities.

Like rivers again, calendars have often played an integral part in the development of individual cultures. Just as the civilization of Egypt is closely bound up with the inundations of the Nile, the purely lunar calendar of the Muslims has given them the unique characteristic of being oblivious of the seasons.

A third point of similarity between calendars and rivers is that it is not easy to change their course, much less to stop their flow. The slow momentum behind each calendar, based upon the mass of people following it and the time through which it has flowed, makes it irresistible and unchangeable by any generation unless it happens to be particularly virile. Fifty years of Europe may bring in more change than a cycle of Cathay but twenty centuries of that continent have not been able to give back to February the one day it needs to bring it into line with the others.

Nevertheless, if one tries to take an inventory* of the numerous calendars

*Historians have identified more than 1,000 different calendars. Of these, 100 stem from ancient Greece. One writer suggests: "The original sources of the calendar cannot be less numerous than the communities within which man was organized. In the long ago these communities were widely separated, each from the others. There was intercommunication, but it was slow and difficult. Each organized society, however small, had to depend largely on itself and its own institutions."

which have existed among different peoples one finds that, like innumerable little rivers, many calendars have lost themselves in the sands of time. Each civilization, each dynasty, each people had some sort of calendar which ran out with the passing of its respective human organization. Even the Jelali calendar, associated with the genius of Omar Khayyam, and supposed to be based on the most accurate measurement of the solar year, is today no more than an event preserved in the museum of human history.

But this multiplicity of calendars was chiefly the outcome of isolation. Printing, we must remember, was introduced into India only two hundred years ago. Before that, and even until recently when the radio has made a single world calendar indispensable, there was neither a need nor a possibility of having a uniform calendar. Every people, culturally separated from the rest, had necessarily to have their own calendar and each made one according to its own genius.

But the radio and the airplane have changed all that. Co-ordination not only in the year, the month and the date but also in the time, correct to the minute and the second, is now possible. That is why the proposed calendar reform for introducing a sensible and acceptable calendar throughout the world does not now seem far-fetched or unnecessary. It is bound to come in spite of all the opposition it is likely to meet from conservatively minded peoples among Christians, Muslims and Hindus and a thousand others. They will be as helpless in preventing it as in preventing the coming of the radio itself.

With this new international calendar we shall still have the twelve months as ordained by God from the beginning of time on our planet. The number of days in each month, however, will be more uniform and there will be a closer correspondence between the dates of the month and the days of the week. The only addition which I would make to the proposals of The World Calendar Association would be that they base their New Year also on a more rational basis.

In closing, I apologize for the boldness of some of my assertions. At any other time of human history, such seeming heresies would have been punished with more than verbal criticism. But today, we, along with the rest of the world, are at the brink of a precipice. We either speak out our minds and lay ourselves open to misunderstanding and misrepresentation or go down the brink. I shall be satisfied if I have evoked a little doubt and a little misgiving—for these alone are the precursors of thought and action and progress. I leave my readers with a verse from one of the earlier suras of the Koran delivered when the luni-solar calendar was in vogue:

It is He who hath appointed
The Sun for brightness
And the Moon for light
And hath ordained their stations
That ye may learn the number of years
And the reckoning of time;
God hath not created all this
But to manifest eternal truth
He maketh His signs clear
To those who understand.
Verily, in the alternations of night and day
And in all that God hath created,
In the Heavens and in the Earth,
Are signs
For those who pay heed.

WHY THE WORLD NEEDS THIS REFORM

By Pasteur Jules Jézéquel

President, National Council of L'Amitié Internationale, Pau, France

(Translation by Alice B. Connolly)

SINCE the beginning of this century, the faults of the prevailing calendar have become more and more pressing. The irregularities and deficiencies of the current system were causing numerous and serious inconveniences, and were obviously responsible for a considerable waste of time and money. Business men, scientists, educators and religious leaders began to clamor for a revision. The earliest pressures came from organizations like the International Chamber of Commerce and the International Astronomical Union. Statesmen like Lord Desborough of England and churchmen like Cardinal Mercier and the Archbishop of Canterbury urged action, first on the Swiss Government (about 1910), and later upon the League of Nations.

The argument they presented was that among the numerous reforms—moral, judicial, fiscal and political—which were a necessity in the brave new world that came into existence with the turn of the century, this reform of the calendar was by no means the least urgent.

Only gradually did governments accept their argument. People even in high places argued "Isn't the calendar good enough as it is?" A French critic of Cardinal Mercier said, "Let's leave well enough alone. We get our calendar worked out at the beginning of each year and find in it all the information we need.

What could be more simple? Why create difficulties where none exist at present?"

But this was a position which could hardly be maintained persistently by any thoughtful person. The situation is not so simple as to be dismissed with a mere gesture. Habit makes us think that the calendar is adequate for our purposes—but if we look at it more closely, we see that it is full of complications and disadvantages. A noted biologist, speaking the language of science, calls it "a little monster," and justifies his use of the term by referring to the dictionary definition of monster as "any organized form of life greatly malformed by the lack, excess, misplacement or distortion of parts or organs, and thus made up of inconsistent parts or characters."

When the League of Nations took up calendar reform, its officials were immediately bombarded with more than 500 different plans for revision, including everything from decimal systems to proposals which entirely eliminated the week. The League, after many years of meticulous study and consultation, retained only one of the 500 plans—the one now known as The World Calendar.

The United Nations has accepted the preparatory work which was so thoroughly accomplished by its predecessor. It proposes to go on from that point, and the problems of enactment have already

received consideration in meetings at Lake Success, Geneva, and at the new headquarters in New York City. The next step will be taken at the Geneva sessions in the summer of 1954.

From the reports of the League and the UN, one gets an astonishingly broad horizon-view of the world's calendar problems. First of all, one is led to realize that the Gregorian calendar is not the only system in current use. Mohammedans and Israelites have calendars of their own, and India has so many that the mere tabulation of them would require a bulky volume. Each of these systems reckons time after its own fashion. In Palestine, this is the year 5714; in Moslem countries it is 1373; in Japan it is 2613. There is no agreement as to when the year begins; there is even some difference of opinion as to when the day begins.

Astronomers, who are particularly competent in the field of time, have such a small opinion of the Gregorian calendar that they count their days from 1 January 4713 B.C., numbering them in an endless arithmetical series without regard for weeks, months or years.

Our system of time measurement has no claim to prestige except its ancient origins. It comes to us from Egypt and Rome, and has already celebrated its 2,000th birthday. Historical writers sometimes call it the "Christian" calendar, but it has nothing Christian about it except for the slight corrections made by Pope Gregory XIII. Actually it is a pagan system, as testified by the names given to months and weekdays. Some of its irregularities are the result of arbitrary and capricious acts of individuals such as Julius Caesar and Augustus.

The division of the year into weeks is

a mystery of ancient origin. The astronomers of Chaldea were really astrologers, and they created the seven-day period of time for reasons which cannot now be very clearly determined. It has survived because it meets certain human needs and conveniences. But, unfortunately, it fits badly into a solar year. There are 52 weeks in a year. But 52 times 7—it makes only 364 days, and the remainder—one supplementary day, or two in leap years—is very embarrassing. Here is the stumbling block in our present calendar.

The correct way of handling this supplementary day was pointed out about 1834 by a learned Roman priest, the Abbé Marco Mastrofini, in a 314-page book whose publication was duly approved by the ecclesiastical authorities. Since that time, every worth-while project for calendar reform has embodied the Abbé's proposal for removing the week-day designation of the last day of the year and for dealing similarly with the extra day of leap year.

Since 1931, leadership in the calendar reform movement has centered in The World Calendar Association, which has its main offices in New York City and branches in most important countries in the world. For many years it acted in a consultative and advisory capacity with the League of Nations. When the second World War put the League out of existence, The World Calendar Association weathered the storm. In due course it presented its plan to the United Nations, which recognized that this proposal had simplicity, clarity and moderation.

The revised calendar, now on the way to enactment, does not propose any enormous upheaval. It retains the present division of the year in 12 months and 52

weeks of seven days each. But it introduces order into this arrangement.

In The World Calendar, the supplementary days are the only important innovation. The 365th day of the solar year is intercalated between the end of December and the beginning of January. It becomes a world holiday. (In leap years the 366th day of the solar year is placed at the end of June.)

The proposed reform is simple, clear and eminently practical. It brings unquestionable benefits to industry, labor, transportation, science and education, thanks to its equalized periods which are permanently stabilized and made strictly comparable for statistics, evaluation and forecasting. Its benefits include substantial savings of time, labor and money—the stoppage of wastes which are uselessly thrown to the wind at present.

It would seem that we need but to explain The World Calendar to have it adopted enthusiastically, so great is the progress that it will allow the world to realize. What then is the obstacle, and why the delay? So far as the present writer can determine, the only serious difficulty thus far has been inertia. The nature of mankind makes it difficult to move in matters of this kind. I have met people who have said to me, "There must be some serious objection to this reform, or it would have been adopted long ago." I have given considerable study to their comment. I have found that the proposals have at no time met with any clear or determined opposition. Even religious leaders, who are by nature conservative, have almost uniformly favored it. The Catholic Church has provided some of its ablest supporters, and the Vatican has officially declared that it finds no dog-

matic objection or difficulty to the revision of the *civil calendar*. The same attitude is held by Moslem leaders, and currently the strongest support for calendar reform comes from India, where multiple religious calendars are a continuous difficulty.

After surveying the whole field, I find that historically the only serious objections have been based on habit, laziness of mind, fear of change and even occasionally a rather curious nationalism.

In my opinion, one of the supreme benefits to come from adoption of the revised calendar is the gift of a World-day dedicated to peace. This 365th day, World-day, uniquely isolated from the rest of the year, will become an occasion on which all nations, free from prejudice, will unite in the celebration of a feast of peace. In leap year the second supplementary day, endowed with all the characteristics of the first, will permit of an even more impressive observance.

We have here no unrealizable aspiration, no unattainable goal. I see a precedent in the way all governments succeeded in adopting the Universal Postal Union, a marvelous institution which assures you that the letter you put in the mailbox—wherever in the world you may be—will reach its destination, no matter how distant. But adoption of a revised calendar is singularly easier than was the creation of a Universal Postal Union. You will see that, once the United Nations declares itself for the new calendar, its enactment will come about without delay or difficulty. The considerable practical advantages of the change will be made clear to peoples everywhere, and an important step will have been taken toward unity and world peace.

SIGNIFICANCE OF WORLDSDAY

*By Elisabeth Achelis**(A New Year's Message sent 1 January 1954)*

AT this festive holiday season when the spirit of good will to men prevails, I am moved to stress the need for a greater unity among mankind. Good will to men and peace on earth belong to the entire world.

As the Ten Commandments are the moral code for mankind, so is the Christmas message universal. It reaffirms the unassailable truth that every man, woman and child is of God. One of the ancient prophets said, "Have we not all one father? Has not one God created us?"

There is a deep significance then to a universal day which peoples of all creeds, nations and climes can observe and enjoy in happy unison. This is achieved in The World Calendar by the new world holiday, Worldsdays, the 365th and last day of the year; it is the new "humanity day" of peace, good will and cooperation, a day to be observed by all peoples and all religions.

In this way, the Jewish Sabbath of rest and worship still remains the seventh day of the week and, in addition, becomes the *seventh* day of every new year. The Christian day of worship and praise is still Sunday, the first day of the week, and the Moslem Friday is still the sixth day of the week, both being observed on their respective *first* and *sixth* days of every new year. Thus these days are enriched by their rightful places in the year as well as in the week. The week of seven days remains unchanged in arrangement—the same unaltered familiar time-period, marking off a day dedicated to the spiritual in life.

It was a humble Roman Catholic priest in the early nineteenth century who with divine guidance conceived the 365th day as an annual closing day between two weeks, without a weekday name. Thus the old year was to be sealed as a complete unit of time and every new year was to begin on the logical first day of the week, Sunday, with Monday the first working day.

Stabilization of the calendar is a reform which is required by increased scientific knowledge, improved communications and the interchange of activities throughout the world. Clock time was stabilized toward the end of the nineteenth century when standard time became universal. Since then the same kind of reform in the calendar has become more and more urgent.

The World Calendar is the inevitable answer to that urgency. In arrangement it gives equal recognition to the seasons, the months, the weeks and the days. The four quarters are equalized, the months are arranged in a rhythmic harmonious pattern. Weeks and months come together at the end of each quarter, and all the time-units are balanced at the close of every year.

The calendar is like the human body, composed of many parts all forming a harmonious whole. No one member is emphasized above others and if any overemphasis exists or schism develops within the body, it becomes maladjusted and discomfort is experienced. Likewise the calendar is composed of different time-units. If any one unit, such as the day or week, is given priority, the calendar too becomes unbalanced, and discord and disagreement develop.

I am confident that such adjustments, as are necessary to establish The World Calendar, will be made with a spirit of peace, good will and cooperation. In this spirit the calendar will become a balanced and orderly time-system and everyone will benefit.

To one and all a sincere wish that the coming years will bring increased peace and happiness, upheld and advanced with the use of the stabilized and equalized World Calendar and the universal holidays—Worldsdays and Leap-year Day.

LONDON CALLING

By Harold Watkins

This is the text of a radio address delivered on 12 March 1954 by the Press Officer of the British Section of The World Calendar Association, over the facilities of the British Broadcasting Corporation, on the occasion of the publication of Mr. Watkins' book on calendar reform, titled Time Counts. The book is published in England by Neville-Spearman, in America by the Philosophical Library.

IN a way, the complicated calendar question is a handicap to the friendship of nations comparable with the language barrier. For counting the passing days and months with different systems is not unlike speaking with different tongues.

It is obvious that a new and universal calendar cannot be introduced usefully unless it is adopted everywhere at the same time, and therein lies the great difficulty. One country cannot go it alone. Only by action through such a body as the United Nations is it possible for calendar reform to take place.

Thus the recent action of the India Government in placing the subject on the agenda of the U.N. Economic and Social Council (meeting at Geneva in July) is vastly important. As an eminent citizen of Delhi pointed out, "India is today using more than 30 different calendars: our situation is chaotic and intolerable." A government committee has gone thoroughly into the subject and the result is that India is now making a formal demand for the adoption of The World Calendar through the United Nations. If this proceeding on the part of the India Government leads at last to the uni-

versal adoption of an improved calendar, all the world will benefit.

In my book I have tried to fill in some of the background of the calendar reform movement, and to bring the subject up to date. There is good reason for my effort, because modern conditions call for such a reform. The growth of commerce and communications, especially over the past decade, has brought out the defects of our present Western calendar and accentuated the demand for revision.

Efforts to improve the calendar have been continuous throughout history. The most famous of the early attempts was that of Julius Caesar. When he became head of the Roman Empire, he found the ancient calendar in a chaotic condition. The decemvirs, who were assigned to take care of it, had failed in their duty: they had adjusted the lengths of months to suit their own purposes, until the seasonal feasts and holidays were completely out of step with the sun. Caesar took the matter firmly in hand and with the aid of competent astronomers, instituted the Julian calendar, dividing the year into 12 months, each with a definite number of days—and inaugurating a regular leap year every four years, with an extra

day to adjust the year's length accurately.

This Julian calendar became the official system of time measurement wherever the Roman Empire reached. It has been said that it had a share in making the Roman Empire possible, for it had an important influence on communications.

In many important features it differed from earlier calendars. For example, it parted completely from the tendency to use the moon as a measure of time: instead, it employed the sun exclusively. Also, it specified precisely the number of days in each month. And perhaps its most novel feature was the leap year.

Julius was not the first one to think of a leap year. The same idea had been suggested in Egypt some centuries before, but the priests were against it and the notion had to be dropped. Under the Roman system it became permanent and had the opportunity to prove its worth.

Meanwhile, in other parts of the ancient world, China and the Asiatic countries were experimenting with their own calendars, and every little while there were changes based on added astronomical knowledge. India gave much attention to the subject and invented many intricate time systems. She still has many of them surviving today, variants of ancient calendars.

In the far-off Americas the Mayans, Incas and Aztecs devised their own methods of keeping time, marvels of accuracy which are still being studied by archeologists.

As the Roman Empire crumbled, Caesar's calendar survived. But in one area there was a remarkable development, with a profoundly disturbing influence on

the world's time reckoning. This was the re-adoption of a strictly lunar calendar by the followers of Mahomet in the seventh century. The year 622 A.D. became the beginning of their calendar era, being the year of the Prophet's Hejira, and therefore the start of the Hijra calendar. The Moslem year, used now by 300,000,000 people, has a length of 354 days as compared with the 365 days of the normal year in the solar calendar.

Even the excellent Julian calendar was not quite correct, astronomically, since the solar year is not precisely $365\frac{1}{4}$ days long, but 365 days, 5 hours, 48 minutes and 46 seconds. Over the centuries this small error caused the calendar to go wrong with the seasons, and a correction was made by Pope Gregory in 1582, which involved dropping ten days.

There were other defects which Gregory did not correct. His revision still left the months with their irregular number of days in irregular order. Seven of our months have 31 days, four have 30 days, and one of them, February, may have either 28 or 29 days. The result of this hodgepodge is that our quarterly and half-yearly periods are annoyingly irregular, creating unnecessary difficulties for statisticians, accountants, business men, and everybody who uses periodic figures for comparisons.

Between 1923 and 1937 the League of Nations went deeply into the subject of calendar revision and considered all possible solutions. Ultimately it decided that there was only one reasonable answer, the perpetual World Calendar of equal quarters.

MEMO FROM THE UNITED NATIONS

A Radio Program Prepared by the U.N. Radio, 24 March 1954; Written and Narrated by Cecil Lewis; Produced by J. Donald Pringle; Featuring Miss Elisabeth Achelis (President The World Calendar Association), Dr. Clarence Decker (Ex-President University of Kansas City), Rajeshwar Dayal (Permanent Delegate of India to the U.N.)

ANNOUNCER: *Memo from the United Nations*—a report from the United Nations to you. Dated from Headquarters; prepared by the International Staff of U.N. Radio, setting out the story of many people in many places who are busy today with the world's job.

LEWIS: Thirty days hath September, April, June and November; all the rest have 31, except February which has 28 days clear—and 29 in each leap year.

This little rhyme—the only way many people can remember how many days there are in the various months—would be literally out of date if India's proposal for a World Calendar is adopted. India is soon to bring this question before the Economic and Social Council at U.N. Headquarters. And so today our program is about calendars—past, present and future.

A dry subject? Not at all—a fascinating one, and an extremely personal one too, for a change in the calendar would affect the lives of almost every living being on earth. We of the West have the Gregorian calendar, and we get along fairly well with it. But in India, for instance, there are 30 different calendars, used in various parts of the country. How would you compile, say, a railway timetable on that basis?

The suggestion is that one constant, uniform calendar would be of great use in the world of today. It would simplify a great many national and international dealings. Our present Western calendar is already a mass of inconsistencies, according to Miss Elisabeth Achelis, the President of The World Calendar Association.

ACHELIS: The year is divided into months, quarters and half-years. Are these time units exact? Are the months regular in length, like the hours on a clock? Are the quarter-years and half-years? They are not. The months vary in length from 28 days to 31 days; the quarters may be either 90, 91 or 92 days; the first half year is 181 days long, the second half is 184 days long.

There is another defect of the calendar which is annoying to everybody. I refer to our wandering weekdays. Any given day of the month—say New Year's Day or Christmas, or your birthday—comes on different weekdays in successive years. This is because there are not an integral number of weeks in a 365-day year. There are 52 weeks plus one or two days in each year.

LEWIS: Let's go back a bit and see how all these inconsistencies came about. Nobody can say what time is. The best definition, perhaps, is one made by a poet. He called it "a perpetual perishing." It's a merciless one-way street, up which we can only reverse in memory. . . . But since prehistoric days, men have sought to

measure time's passage. The Borneo tribesmen pegged the shadow from a totem pole. When the shadow passed its longest point, they knew it was time to think about planting crops.

The Druids, the Chinese, the Incas, the Egyptians, all had extremely accurate methods of determining the exact moment at which the earth completed its orbit round the sun. On only one day each year did the sun, lined up along two stones, fall exactly on the marked spot on the altar. When it did so, the New Year had begun.

Dr. Clarence Decker, ex-President of the University of Kansas City and a firm champion of the new World Calendar, reminds us:

DECKER: If we look back to the beginnings of human civilization, we find that man's first organized intellectual achievement was the making of a calendar. Even the cave man felt the need for some system of recording the days, of wrapping them up into convenient bundles.

Everybody, of course, knows the story of Robinson Crusoe, who was shipwrecked on a desert island, and how one of his first tasks was to devise a method whereby he could keep account of the passing days. Lacking pen and ink, he planted a stout pole in the ground. Each day he carved a small notch in the pole. And as the notches mounted, he marked the weeks with a longer notch every seventh day.

LEWIS: And we must remember that when Robinson Crusoe did find a companion, he knew—thanks to his simple calendar—that the stranger turned up on the day after Thursday—and he called him “Man Friday”. . . . But we still haven't come to grips with the difficulty of constructing a calendar.

PRINGLE: There are really two distinct measurements of time. The first is based on the rotation of the earth. That's simple and constant. Every revolution—a day and a night—we have divided into 24 parts called hours, each of which is again divided into 60 minutes, and each minute itself into 60 seconds. That works, and will continue to work until the earth's spin gets slower or faster.

But the second movement we try to measure—that is, the time taken for the earth to complete one circle or orbit, around the sun—is the real difficulty. Because it doesn't mesh with the earth's rotation. That is, the year isn't an exact number of days, but is precisely 365 days, 5 hours, 48 minutes and 45.51 seconds.

LEWIS: And those odd hours, minutes and seconds are the cause of all the calendrical headaches—headaches that have been going on for quite some time. . . . There is a calendar—probably the oldest in the world—on Lake Titicaca in the Andes, which can only be deciphered on the supposition that in those days there were only 285 days in each year and the moon was whizzing around the earth every ten days. This probably belongs to some remote period before the flood.

Then there is the extraordinarily complicated Aztec calendar, originally inscribed on a gold plate five feet across. . . . Another ancient calendar was the Signs of the Zodiac, an imaginary belt in the skies through which the sun passed each month. It was all right 2,000 years ago, but the starry constellations, after which each sign was named, have all shifted today. Dr. Decker says:

DECKER: Since man graduated from barbarism, there have been thousands of calendars. There are still a good many different types being used throughout the world even today—not only the familiar Gregorian or Western, but also the Jewish and Moslem calendars, among others.

Recently when I was in the Near East and in the Far East, I saw this Jewish calendar in use as the official system in the new state of Israel; and the rather complicated Moslem calendar which rules the life of 300 million Arabs and other followers of Mohammed. And when I was in India I marvelled at the multiplicity of calendars which are used in various parts of that vast sub-continent. I was told that more than 30 completely variant types of time measurement are current there—and this fact undoubtedly accounts for Prime Minister Nehru's present interest in unifying the Indian calendars as part of an international movement for calendar reform.

I have discussed the history and evolution of the calendar with a great many people in many parts of the world. It is not just a mathematical formula or a cold scientific prescription: it is a product of human ingenuity, and in creating it men have mixed together such strange components as science and superstition, wisdom and romance, religion and mythology, mathematics and witchcraft, compromise and prejudice. It has gone through many changes and improvements. And it is not yet perfect.

LEWIS: It was Julius Caesar who got the calendar more or less taped—365 days every year and a day extra every four years for leap year. This went all right for a few hundred years, but then the Biblical idea of a "week" came up. Miss Achelis takes up the story:

ACHELIS: The old Roman calendar, as Julius set it up, was perpetual. That is, every year was exactly alike. The division of the months by means of the Ides, Nones and Kalends went on year after year, in exactly the same way. But when the Christian weekdays were substituted for the Roman Ides, Nones and Kalends, nobody thought about finding some way to square the weeks with the 365-day year.

LEWIS: Julius Caesar had, as we remember, some trouble with the Ides of March. . . . But those odd hours and minutes we spoke of kept piling up at the rate of 19 hours every century, so that in 1,500 years the calendar was about 10 days behind schedule. Pope Gregory put that right in 1582 by a simple decree. He just dropped ten days out of the calendar and started again. . . . That's how we got our present calendar. As you can see, it's the result of rule-of-thumb methods.

And now, what of the new proposal for a World Calendar? It is, as we said at the outset, being put forward by India. Mr. Rajeshwar Dayal, India's Permanent Delegate to the United Nations, came to our studios to speak about it.

DAYAL: It is appropriate that the World Organization should deal with this question, for there could hardly be anything more *universal* than this problem of calendar reform, which concerns itself with man's attempts to measure the passage of the days and nights, the months and years.

The drawbacks of the present Gregorian calendar are well known, and I need not repeat them here. On the other hand, The World Calendar which has been put

forward by my delegation, is scientific, stable and constant. It would apply equally to the requirements of every section of society—to government, industry, labor, transportation, education and so on.

In the new calendar every year would have the same arrangement of days and months, and the duration of the quarters would be identical; that is, 91 days or 13 weeks. Each month would have 26 weekdays, plus Sundays. Each year would begin on Sunday, the first of January. If adopted it would mean that all statistics compiled on the basis of a month, quarter or year would be strictly comparable. Also we would not need to print calendars every year.

So much for the scientific advantages. The 365th day of the year in this calendar is proposed as an international holiday, to be designated not by any weekday name but by the special name of Worldsdays. This day would be dedicated in each country of the world to the promotion of international understanding and harmony. The celebration of this day should do something towards knitting all races, creeds and nations into a closer bond of fellowship, creating the feeling of citizenship in One World.

LEWIS: The proposed calendar has, as you see, many obvious advantages. What are the chances of its adoption? There is nothing to prevent it—except our ingrained resistance to change. The fact is, we have got used to the present inconsistencies and we resist standardization in the way we have resisted the decimal system or a world language.

Those born on 31 March would have to resign themselves, under the new calendar, to losing their birthday forever—for that day doesn't exist in the new calendar. They, like Humpty Dumpty, would have to say, "It was given me for an un-birthday present."

Finally, we may ask why India is bringing forward the proposal now? Mr. Dayal answers:

DAYAL: My delegation has put forward this proposal *now* because the only feasible time for adopting the new calendar is a year when both the old and new calendars coincide, and a changeover becomes possible with a minimum of disturbance. This will happen on Sunday the first of January, 1956, which gives us just under two years to prepare for this significant and historic reform.

Our proposal will not adversely affect the religious calendars of any sect, for they would always be at liberty to follow their own religious calendars. The World Calendar is for international use, and also for the civil and administrative purposes of all the nations of the world.

LEWIS: We live in a rational age, in which a great effort is being made to achieve common standards throughout the world, and The World Calendar is a logical extension of this idea—to work out a simple universal method to measure the relentless passage of the days of our years.

ANNOUNCER: *Memo from the United Nations* comes to you weekly from the International Staff of U.N. Radio in New York.

COMMENT ON INDIA'S ACTION

Nehru's Attitude Interpreted

(London Daily Express)

INDIA'S Premier Nehru, whose birthday sign is Scorpio, wants the United Nations to help him confound his country's astrologers by giving the world a new calendar.

Despite objections by Britain and America, whose attitude is one of polite bewilderment, he has succeeded in getting his proposal up for discussion by the busy Economic and Social Council when it meets at Geneva in July. Mr. Nehru has told his delegates to make this a matter of priority. Apparently Russia will support him.

Nehru's preoccupation with calendar reform springs from a tidy mind that dislikes the inconsistencies of our present calendar. He also wants to clear up the confusion of India's own 30 different kinds of calendars, ranging from the Moslem lunar system to one for almost every Hindu sect, and to put a real damper on the horoscope industry.

Though he started his own Calendar Reform Committee a year ago, he owes his inspiration to an American lady who heads The World Calendar Association. Her idea, which Nehru wants the world to adopt, is a year with four equal quarters each containing 91 days. The 365th day, 31 December, which we have to have to keep even with the sun, will have a new name, World'sday, and will be a universal holiday.

Reform on World Basis

(Chicago Tribune)

A NEW fight between the United States and India, this one over world calendar reform, is brewing in the United Nations. The Indian calendar proposal would provide one world holiday—World'sday—each year, and two in leap years.

The fight promises to come to a head next month when India wants the U.N. Economic and Social Council to make cal-

endar reform a major item of business for its summer session in Geneva. The United States has opposed taking up the question on the ground that the Council has more important things to do.

If the Indians get their new 364-day calendar adopted by the 18-nation Economic and Social Council and the 60-nation General Assembly, they hope to have it go into effect 1 January, 1956.

The calendar reform sought by the India delegation is backed by The World Calendar Association, whose headquarters are in New York. Calendar fights are not new. The old League of Nations considered about 500 proposed reforms. About 100 have come before the U.N. since 1945.

India's presentation to the U.N. points out that the present calendar is a hodgepodge of 28, 29, 30 and 31 day months, a situation they propose to correct.

India says its proposed calendar will be "more regular, scientific and advantageous from every point of view than the present Gregorian system adopted in the 16th century." The India delegation insists calendar reform is urgent, and they are lining up opposition to any United States move for delay.

India Ready for a Change

(Madras Times)

OUR country has a bewildering variety of calendars, used in various regions for administrative and religious purposes, some lunar, some solar, some luni-solar—the latter with religious holidays determined by a lunar calendar pegged onto a solar calendar. Some of these have eras different from others, while some have no eras at all.

At the moment in India there are more than 30 calendars. In Benares alone there are four, and it is common to find important Hindu festivals like Ganesh Chaturthi and Saraswathi Puja being celebrated on different days in different parts of the country

or even in the same city—as happened this year in Calcutta.

To do away with such anomalies and confusion, a bill will be brought before Parliament soon. Because there is a good deal of dissatisfaction with the now universally used Gregorian calendar, India has submitted a project to the United Nations suggesting a new uniform calendar for the whole world.

Political circles in the capital and leaders in various parts of the country have from time to time suggested that our new National Calendar should be named after the Father of the Nation in commemoration of his attainments and his supreme sacrifice for the cause of the country and the doctrine of non-violence.

International Common Sense

(The Statesman, Delhi)

WITH many things in the contemporary world crying for reform, it might seem to the casual observer that reforming the calendar should have comparatively low priority. That conclusion would perhaps be shortsighted.

Even the Gregorian calendar, in most general use over the globe, has marked defects, not merely theoretical but practical. The number of working days and holidays varies not merely week by week and month by month, but even year by year, creating commercial complications of a ramifying kind (estimates of exports and trade balances, for instance) and parallel problems of accountancy, such as "adjusted" averages, with much waste of effort and expense.

Yet the Gregorian calendar is by no means alone concerned, or even in a particular area necessarily the most important. In India, no less than 30 systems of dating compete for public favor.

It was not necessarily to be expected, but is gratifying to observe, that official India is a pioneer in the movement for reform. She has been the latest to sponsor before the U.N. a re-organization of the Gregorian system, a revision so sensible and simple

that, but for World War II, it might already have been undertaken under the auspices of the League of Nations.

This, by the simple process of making one day a year (or in leap years two) what the Romans called "inter-calary" (not reckoned as part of the normal numbering), allows complete repetition every quarter of a 31,30,30 month system with 26 working days in each, and many other commercial and social advantages. It does so without renaming part of November "Brumaire," as the French revolutionaries did, or indulging in other extravagances such as eccentric names for the days of the week, or a bogus week such as the Russian revolutionaries adopted.

In other words the basic idea is the work of sensible people rather than cranks—whether or not one approves of later embellishments, rather redolent of "uplift," such as calling the intercalary day "Worlds-day."

However, it remains to be seen how far sense will prevail before the next obvious deadline, which depends on the desirability of beginning each year under the new system with a Sunday, and for which the next suitable opportunity is 1956.

Meanwhile India herself is attempting to instill a little order into the chaos of her own domestic dating systems, through the medium of the Calendar Reform Committee instituted a year ago with the cordial good wishes of the Prime Minister. Like its international counterparts, this endeavors to disarm traditional suspicion by making fully clear that it is not treading on anybody's corns. With religious bodies which derive the dates of important festivals from the variable lunar calendar there is not, of course, the faintest intention of interfering any more than the international reformers had any such aim (though there is considerable support in Christian circles for a fixed Easter). What will come of all this remains to be seen. But all the problems seem now to have been gone into in meticulous and fairminded detail, and the whole enterprise gains an additional fillip from India's own initiative in the international sphere.

FROM THE MAIL BAG

Regarding certain religious objections to calendar revision, I don't think that Jews, even the most pious ones, will object to the addition of another praying day which will not be included in the counting of weekdays. The Worldsdays would perhaps be called in Hebrew Yom Olam, and the Leapyear Day Yom Ibur.—Prof. Micha Klein, Tel Aviv, Israel.

It is important that we make calendar reform a functioning institution throughout the world. Our human society cannot expect sanity and constructive growth if it continues to shackle itself with obsolete customs and primitive thinking. We want to appreciate and utilize the achievements of the physical and biological sciences for more intelligent living; in this light, the new calendar is an indispensable necessity for wholesome and rational relationships.—H. E. Bailey, Board of Education, New York.

People in India would like to see the world follow a Universal Calendar. Religion should not have anything to do with the civil calendar. Surely it does not matter on what particular day any religious function or festival falls as long as it is not obliterated in the changeover.—D. I. Ahmadi, Bombay Municipality, India.

Recognition of The World Calendar Association by the U.N. as a non-governmental organization affiliated with its Economic and Social Council is arousing lively interest among people who have not heretofore been seriously interested. I believe calendar reform will be adopted in the near future. All those who are looking forward to a better world find in this achievement a glorious sign of progress.—G. W. Sowler, Allegan, Mich.

Introduction of The World Calendar, besides its undoubted value to business, science and everyday living, will provide an over-all unifying force in the interest of world peace. If nations can universally agree on a matter like calendar reform, there should be no limit to what they can do in

attaining world unity on broader issues.—John K. Lavett, Sydney, Australia.

In my addresses on behalf of calendar reform, I have found a short question-and-answer period advantageous. It indicates what the audience has assimilated from the talk and what they are thinking about the problem.—Commander William A. Mason, U. S. Navy (Ret.), Redondo Beach, Cal.

In correcting the present calendar, we approve the plan of The World Calendar as the most appropriate proposal.—J. Matsuo, Chief of Standards, Mitsubishi Electric Co., Amagasaki, Japan.

A world calendar would be a very great improvement in helping us to calculate the constant shifts in our time-machine.—Arthur Krock, *New York Times*.

Having worked many years in a statistical office, I realize both the material advantages and the moral values which calendar reform will bring to the whole world. All of us will be benefited, and the enactment of the new calendar will constitute a glorious achievement for humanity.—Bernardo Bajdeff, *Boletin Matematico*, Buenos Aires.

This is a reform which has the support and approval of scientists, scholars, churchmen and business men generally.—Brother Boniface, C.F.X., Louisville, Ky.

I quite agree that the establishment of a stabilized calendar is a present-day necessity.—Abbé Granereau, School for Priests, Lamorlaye, France.

In Italy there is a good deal of discussion about the calendar reform proposed by the United Nations.—C. Rossi, Director, Italian Standards Association, Milan.

As a strong supporter of calendar standardization, I was happy to find *The Times* giving important space to this matter.—W. F. Bushell, Birkenhead, England.

CURRENT PRESS COMMENT

Active Support in Ireland

Irish Times, Dublin

PROPOSALS for organizing an Irish committee on calendar reform were suggested at the Dublin Rotary Club, meeting in the Royal Hibernian Hotel. The guest speaker was James Avery Joyce, honorary secretary of the British World Calendar Association. He told the members about the new calendar which will be universally adopted in 1956 if representations by his organization to the United Nations prove successful.

According to Mr. Joyce, the calendar now in use is almost 2,000 years old. Since it was installed by Julius Caesar, methods of measuring time have changed greatly. The old water clock has been discarded for chronometers and scientific devices that divide time into thousandths of a second. But the calendar, except for slight modifications by Pope Gregory XIII, remains the same as in Roman times. During all the intervening period, it has been the subject of controversy.

The proposed new calendar is the result of many suggestions and years of patient research. It was first suggested by Abbot Marco Mastrofini, a Roman Catholic priest, in 1834. Seventeen governments have now given their approval.

Here's a Worthy Cause

Havre (Mont.) News

AS a subject of discussion, calendar reform has been chewed over from such mighty places as the halls of Congress to the back room of O'Hoolihan's oyster house. The debate has waxed hot and furious, with the pen and oratory equally active.

Most people will agree that the present calendar is a hodgepodge with little rhyme or reason in its make-up. Fourteen different

types of years are used. It's enough to drive anyone goofy.

There are many capricious angles to the current system, which is obviously wasteful. Coming from a person in the printing trade this may sound unusual. Actually the printing business has profited through our screwy calendar system, but we would prefer order on an international scale because it would mean less confusion all the way around. There has been talk about one world: what about one calendar—a strong one with some sense to it?

It is a fact that much time and effort are spent every year in developing new schedules for institutions, government and private business. This is large-scale waste because the schedules cannot be used or applied to the following year. Most people attempt to be as sensible as possible—why not get sensible about the calendar?

Cure for Many Headaches

Panama City (Fla.) News

REVISION of the calendar would relieve ten thousand headaches and simplify countless business transactions. The proposed reform is a perfectly practical plan. Far from being the creation of visionaries, its chief boosters are industrialists, bankers and accountants, who believe it would save substantial sums of money.

Anything which requires scheduling would benefit. Anything which involves statistical comparisons would be simplified. Florida, with its tourist business, would be specially favored, because vacation planning would be simplified and the handicap of split-week holidays would be overcome. The whole thing looks so simple that it should have been adopted long ago.

Some of the brainiest men and women in the world have been back of this proposal for a long time. Only now are they beginning to see hopes of success.

THE WORLD CALENDAR ASSOCIATION, INC.

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CHARLES S. MCVEIGH, *Vice-President*

HARRIET A. LILLIE, *Secretary-Treasurer*

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EDITORIAL PARAGRAPHS

More than a century ago a very wise Frenchman, Pierre Prudhon, said: "Of all the products of labor, none has cost more in time and patient effort than the calendar." It is time for everybody to approve a bold improvement in the calendar, to make it better adapted to modern needs.—*Journal, Toulouse, France.*

How would you like to have a calendar that would last a lifetime? No yearly models: every year the same. This is one of the advantages of The World Calendar proposed at the United Nations.—*Christian Science Monitor, Boston.*

The reformed calendar is a rational, universally applicable and mathematically respectable idea.—*Guardian, Manchester, England.*

If plans proceed as outlined, the United Nations will authorize the drafting of an international convention on calendar reform, for submission to all nations. The new calendar will go into effect at the earliest convenient date after a majority approves.—*Plain Dealer, Cleveland, O.*

Basic principle of the proposed World Calendar is to iron out all the irregularities of the present calendar. Some 17 countries have approved.—*Dispatch, Edinburgh, Scotland.*

We have decided to come all the way out for The World Calendar, now before the United Nations. This strikes us as a sensible reform, and we see no good reason for putting it off any longer. It is a much neater arrangement than the one we have now.—*Telegram, Worcester, Mass.*

Introduction of a "world calendar" as a universal system of time measurement is to be discussed at the United Nations. India, which has four major calendars in various sections of the country and a number of minor ones of strictly local character, has taken the lead in introducing this question, asking to have it taken up at the next meeting of the U. N. Economic and Social

Council. The proposed new calendar would iron out all the irregularities of the existing Gregorian calendar.—*Herald, Sydney, Australia.*

It is nice to welcome to these shores Sir Harold Spencer Jones, the Astronomer Royal. One might say that time is Sir Harold's business. His specific aim on this visit is to urge adoption by the U. N. of a new, logical calendar. The present calendar doesn't have a leg to stand on.—*Hartford Courant.*

Calendar reform is still waiting for an answer acceptable to all nations. The League of Nations tried to grapple with the question, and it has been talked over in the United Nations. Now India has brought it up again in the form of a concrete proposal for the adoption of a new perpetual world calendar in 1956. The UN Economic and Social Council will take the matter up at its next session.—*Times, Baroda, India.*

One of the world's greatest headaches and international disorders is the calendar. It is disordered, inefficient and inconvenient.—*Warwick (R. I.) Valley Times.*

All the inconveniences of the Gregorian calendar are corrected in The World Calendar proposed for international adoption by the government of India.—*Tribune, Geneva, Switzerland.*

Spinsters throughout the world would be given the green light at their most desperate moment, on a new extra day at the end of June in leap year, if The World Calendar is adopted.—*News Leader, Richmond, Va.*

This proposed new World Calendar is the result of many suggestions and many years of study and research.—*Times, Dublin, Ireland.*

The United Nations plans to discuss introduction of a World Calendar, so simple that anyone can mentally figure out the weekday of any date in the year.—*Register, New Haven, Conn.*

The World Calendar Association, Inc., will gratefully receive contributions for furthering its work. Such contributions are tax exempt under Federal and New York State Income Tax laws.



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REFORM

CALENDAR MARCHES ON
June 1954

THE WORLD CALENDAR

1ST
QUARTER

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7					1	2	3	4					1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

2ND
QUARTER

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7					1	2	3	4					1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

3RD
QUARTER

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7					1	2	3	4					1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

4TH
QUARTER

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7					1	2	3	4					1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
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29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

Worldsday, (a World Holiday), W or 31 December (365th day), follows 30 December every year.
The Leapyear Day, (another World Holiday), W or 31 June follows 30 June in leap years.

In this Improved Calendar:

- Every year is the same.
- The quarters are equal: each quarter has exactly 91 days, 13 weeks or 3 months; the four quarters are identical in form.
- Each month has 26 weekdays, plus Sundays.
- Each year begins on Sunday, 1 January; each working year begins on Monday, 2 January.
- Each quarter begins on Sunday. ends on Saturday.
- The calendar is stabilized and perpetual, by ending the year with a 365th day that follows 30 December each year, called Worldsday dated "W" or 31 December, a year-end world holiday. Leap-year day is similarly added at the end of the second quarter. called Leapyear Day dated "W" or 31 June. another world holiday in leap years.



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JUNE 1954

No. 2

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By Elisabeth Achelis

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Charles D. Morris, Editor

Linda Halsted, Associate Editor

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A review of the past
A survey of the present
A plan for the future
In the process of acceptance

At the request of the Government of India, The World Calendar has been placed before the United Nations at the meeting of its Economic and Social Council in Geneva, July 1954.

The subject involves a variety of historical factors and requires some comprehensive knowledge of the numerous calendars currently in use throughout the world.

To assist the delegates at ECOSOC, it is timely to present a brief interpretation of these important backgrounds, supplementing and summarizing the somewhat scattered material already available.

CALENDAR MARCHES ON

By Elisabeth Achelis

◆◆◆ Chapter I

ONCE UPON A TIME

A wonderful stream is the River Time,
With a faultless rhythm and a musical rhyme,
And a broader sweep, and a surge sublime,
As it blends with the Ocean of Years.

—B. F. Taylor

P RIMITIVE man's first efforts at measurement dealt with his need for recording the passage of days. The attempt to formulate a calendar was his earliest organized achievement. From this beginning he progressed to measure other things—length, height, weight and distance. The arts of writing, architecture and mathematics were inevitable results of the calendar.

Calendars came long before clocks. Measurement of days into convenient bundles—such as weeks, months, seasons and years—was more important than the counting of hours, minutes and seconds. The cave man felt no need for hourglass or sundial. Clocks, as precise measurers of Time, did not come into use until the thirteenth century. Meanwhile the quest for calendar improvement had been going on for thousands of years.

Creating a good calendar was a baffling problem. Many ingenious experiments were attempted in seeking the answer. The difficulty was always how to establish an accurate and harmonious relationship between the various natural time markers provided by the sun, moon and stars. Perfecting the calendar was a long and arduous process that has continued through the ages and is still with us.

Ancient Babylonians and Egyptians, Julius Caesar and Pope Gregory XIII were all pioneers in devising a better time system. Upon their endeavors rests the calendar of today: they were the builders of the calendar now used by the Western world—which to a certain extent has also been accepted by Eastern nations, operating alongside such diverse systems as those of the Jews, the Moslems and the peoples of India.

The Caesar-Gregory calendar which we have today is far from perfect. It still contains annoying irregularities and inherited inconveniences which demand correction—especially in an age when men are living closer together

and when their many interrelated activities call for a high level of accuracy, order and stability.

Proposed improvements have been a matter of international concern from the beginning of this century. Demand for their enactment came first from the International Chamber of Commerce in 1910; the movement was making progress when World War I interfered. It was further advanced by the League of Nations from 1923 until 1939 when World War II interrupted. It came before the United Nations in 1947, when Secretary-General Trygve Lie made a comprehensive report that provided the basis for legislative proposals in 1949 and again in 1953.

In the latter year, the initiative came from India, which submitted a motion supported by a Council vote of 12 to 2, stating: "The Government of India consider that the plan for the reform of the Gregorian Calendar proposed by The World Calendar Association is of great importance to the nations of the world. The purpose is to adopt for the whole world a new, fixed, uniform and invariable calendar, more regular, scientific and advantageous than the Gregorian."

An accompanying Memorandum added: "The ideal of the whole world is to have a logical and perpetual calendar to replace the present, because it is widely recognized that the calendar we now use is unsatisfactory for the economic, social, educational, scientific and other activities of man. Modern progress demands the change. . . . Such a revision has been the subject of study and research on the part of experts, institutions and international organizations for many years. The consensus of opinion is that a new time system is necessary . . . that it should be uniform, an invariable calendar, perpetually the same."

Thus calendar reform became an urgent matter for international action in 1954.

The objective is to establish a single standard civil calendar for the entire world, a scientific system of time measurement, without sectional, racial or sectarian influence. The improvements required are that the new calendar should adjust the irregular length of months, should equalize the quarterly divisions of the year, should coordinate the various time units, and should arrange the weekday sequence so that weekdays and month-dates will agree and be identical in succeeding years—thus restoring the "perpetual" quality which was lost with the introduction of the seven-day week in 321 A.D. The chief difficulty with the calendar is that there are $52 \frac{1}{7}$ weeks in a 365-day year: the extra $\frac{1}{7}$ of a week causes the weekday wanderings. And this is a serious defect in a system of measurement that should be as precise and invariable as are our other scientific systems of measuring. The wanderings of the calendar are increasingly burdensome to an advancing civilization that demands accuracy, reliability and efficiency in its activities, its planning, its records and its statistics.

Inasmuch as the revised calendar is on the threshold of acceptance, there are doubtless many people who will welcome a brief account of the history of the movement and its background in Egypt, Rome, Palestine, India and the Arab world.

The onward march of calendar reform to its goal is, I am convinced, inevitable. The proposed changes can be put into effect without serious dislocation or disturbance, and with many benefits that will prove of practical advantage and profit to everybody, everywhere.

One of the benefits is that the enactment of a revised calendar provides an immediate pattern of international cooperation, a tangible proof of world unity in action. This was emphasized in the Memorandum submitted to the United Nations by India, which stated in one of its final paragraphs: "The 365th day of the year in The World Calendar is proposed to be an international holiday, without any weekday name, dedicated simultaneously in every country of the world to the universal harmony and unity of mankind, thus knitting all races, creeds, peoples and nations into a closer bond of fellowship, creating world-wide citizenship in the *One World*. The potentialities for strengthening and promoting international peace among all nations are of great value."

When I undertook the leadership of the international movement for calendar reform in 1930, my first task was to confer with outstanding people both at home and abroad, in an effort to organize and unite the widely scattered supporters of the cause. One of my earliest and most enlightening talks was with Mahatma Gandhi, whom I met in London.

For a whole evening I sat with him on the hearth of an old-fashioned coal-burning fireplace in his Knightsbridge residence, and discussed the future of calendar reform. We found ourselves in complete agreement as to the desirability of a change. This was what could be expected from the great leader. But he opened my eyes as to the special situation in India, where there are about fourteen different calendars in current use. "This results in unbelievable confusion," said Gandhi earnestly. "It would be a splendid thing if our 350,000,000 people could have a single national unified calendar. I am in favor of such a calendar. I am in favor of a standardized calendar for the whole world, just as I am in favor of a uniform coinage for all countries and a supplementary artificial language (like Esperanto, for example) for all peoples."

After our interview, Gandhi issued a statement to the press, in which he said: "I have been informed of, and I welcome, the international movement for calendar reform. I am always ready to endorse any honest movement which will help to unify the peoples of the world."

Gandhi's belief in the need for an improved calendar encouraged many of India's leading statesmen and scholars to take up the matter. Among them was his close friend and successor, Prime Minister Jawaharlal Nehru.

Another enthusiast is an eminent scientist, Professor Meghnad N. Saha, head of the Institute of Nuclear Physics in Calcutta, who eventually became chairman of an official India committee on calendar matters. The report of this committee was the energizing force which led to India's forceful action at the United Nations in 1953.

◆◆◆ Chapter II

AT HISTORY'S DAWNING

Time was created as
an image of eternity.

—Plato

WHAT is a calendar? According to my definition it is man's chart for reckoning days, planning affairs and dating events. It is a system of arranging the division and recording of Time into years, seasons, months, weeks and days—best adapted to meet the purposes and activities of life.

Among these various time units, man learned after many centuries of trial and error that the *seasons* are at the very heart of the calendar. Their annual recurrence is the foundation upon which an effective and orderly measuring system must be built. From one winter to the next, or from one spring to the next, makes a year of approximately $365\frac{1}{4}$ days.

The seasons in their familiar and changeable aspects are the essential elements of Time. They are the givers of life and its bounty in their recurring periods of seeding, flowering, harvesting and the dormant season. I am always impressed to read of their importance in the Biblical account of the Creation, "Let there be lights in the firmament of the heaven to divide the day from the night; and let them be for signs, and for seasons, and for days, and years."

The order—seasons, days, years—seems to me significant. Seasons are recognized as the foundation of the matter. It is the annual recurrence of the seasons, the intermediary days, and the year as a complete and finished time unit, which constitute the calendar. With this principle established it is a dependable Time-measurer. Here is the blueprint for man to follow if he is to have a reliable standard time plan for his daily living and his daily activities.

Primitive man, however, could find no easy way to devise a seasonal

calendar. With his limited astronomical knowledge he had no simple marker to define the beginning and the end of a "season." It took him many centuries to determine the exact length of a year. All that he knew, after he had graduated from notches on a tally stick, was the ever-present reliable moon, the regular phases of which made it possible for him to divide Time into separate groupings of about $29\frac{1}{2}$ days each.

Thus all tribes and races of men started with a lunar calendar of one kind or another, and made valiant efforts to adjust the "moonths" (months) into the seasons of a sun or solar calendar.

Historians and philosophers tell us that some of the difficulties of constructing a calendar are due to the fact that it deals with an intangible element called Time. When we ask "What is Time?" we find ourselves facing a problem of the first magnitude. The dictionary gives numerous definitions, many of them baffling to the average mind. (1) Time is that order of phenomena in general by reference to which all permanence and change are predicated, usually conceived as a dimension of reality, distinguished from the spatial by the fact that the order of temporal succession is irreversible. (2) Time is the uninterrupted succession of days, years or events; the passing of the hours. (3) In philosophy, the oldest concept of Time is that of an absolute flowing, which is a reality apart from the events which fill it and which has a fixed uniform rate in terms of which all change is measured.

A British scientist, Clifford Troke, is easier to understand: "Time is a flow, differing from all other flows in this, that everything flows with it; since Time moves continually, all the devices which measure it involve motion—what we do is to take a certain regular motion, a movement as regular as possible, and keep it as a standard measure."

The scholarly poet, Henry W. Longfellow, one of my early favorites, makes a similar observation in his fluent prose. "What is time?" he asks, and answers "The shadow on the dial, the striking of the clock, the running of the sand, day and night, summer and winter, months, years, centuries—these are but arbitrary and outward signs, the measure of Time, not Time itself. Time is the Life of the soul."

To us calendar reformers, Time is a universal force, constantly moving and governing man's life and all its activities. It is as much a part of man as his shadow. Its influence is completely impersonal, universal and self-contained—qualities which must be inherent in any effective system of time measurement, whether it be the clock or the calendar.

Throughout the ages the development of clocks and calendars has been singularly different. Clock-makers seem to have understood the scientific nature of Time; in dividing it into hours, minutes and seconds they carefully avoided extraneous influence. Not since the time of the ancient Babylonians have the hours been given religious, astrological or astronomical

names or interpretations. The clock is strictly a scientific instrument by which the seconds, minutes and hours are counted. The result is that our clocks today are admirable in their accuracy, simplicity and universality. The same clock is observed throughout the world.

Contrast this simplicity and perfection with the clumsy irregularities of the calendar, the result of tampering by alien hands and the injection of foreign and irrelevant ideas. Because of some peculiar human kink, the calendar has all too often been the target of people who used it for personal, religious or nationalistic purposes, or who took a possessive attitude toward it, thereby ignoring the broad universal and scientific requirements essential in time measurements.

The calendar is basically a scientific system of measuring Time—seasons, days and years—and whenever this basic foundation is interfered with the calendar becomes distorted and its rhythmic, balanced and harmonious flow is lost.

Here is the underlying error that has beset all efforts at calendar improvement, whether in ancient days or in our current century. By re-establishing the calendar on a purely scientific basis suitable to our civil and everyday life, we can make it as useful, reliable and efficient an instrument of Time as are our clocks and watches.

◆◆◆ Chapter III

BY THE LIGHT OF THE MOON

Thinketh, He dwelleth i' the cold o' the moon,
Thinketh He made it, with the sun to match.

—Robert Browning

WE HAVE seen that primitive man felt an urgent need of measuring Time and counting days. How he first met this need we do not know, but when history begins we find him using, in most cases, some kind of lunar calendar. As H. G. Wells wrote in his *Outline of History*, "The earliest recorded reckoning is by moons."

Primitive man was acutely conscious of the daily recurring light of day and dark of night. His normal pattern of life was to be active in the daytime and to sleep at night. He hunted, fished and foraged for food; he knew a little elementary agriculture and animal husbandry. He was chiefly concerned with his personal and tribal welfare—obtaining sufficient nourishment, clothing, shelter and protection from danger. Gradually along

the road to civilization he began to use tallies; he counted the days on fingers and toes; he used sticks and stones for markers.

He was familiar with the nightly miracle of the moon, which dominated the heavens during the hours of darkness. He was aware of its regular waxing and waning. He marvelled at the new moon's delicate crescent and the full moon's solid orb of light, which he hailed with rejoicing and feasting. He regarded the moon as more essential than the sun, "because it supplied light at night, when light was needed."

The moon was man's faithful friend and guide. Its recurring phases were regular and reliable—new moon, first half-moon, full moon, second half-moon. Here was a celestial chronometer, a heavenly calendar ready-made, providing unfailing markers from which he could count his days. The word *moon*, in its origin, means "measurer."

There are those who believe that the moon's phases, each of about seven days' duration, set apart the grouping of days which we know as a week. Likewise, the complete circuit of the moon's four phases became a moon-th or month.

Unfortunately the duration of a moon-month is not exactly four weeks of seven days each. It is not a precise 28 days, but about $29\frac{1}{2}$ days. To meet this difficulty, primitive man added to his 28-day month an additional one or two days, the brief period of darkness when the moon was not visible in the sky, "when it had gone to sleep." His moon-months were figured at alternately 29 and 30 days.

Eventually the moon-th periods were put together in a bundle of twelve to complete a longer unit, a year. Twelve was a convenient number, "easily divisible in all kinds of ways."

However, this lunar year of twelve moon-months was shorter than the sun-year, which was vaguely marked off by the annual recurrences of the seasons and other climatic conditions. The seasonal year was one of the most important factors in life and could not be ignored. Yet twelve lunar months of alternating 29 and 30 days made up a year of only 354 days, while the sun-year required $365\frac{1}{4}$ days. The only way a lunar calendar could be adjusted to a fairly accurate seasonal year was to add a 13th month every two or three years, and this is what eventually happened to most lunar calendars.

In ancient days the priesthood was the guardian of the calendar, under whose direction the insertion of the 13th month was made. The priests were the first scientists, the first learned men, and the first civil servants in the social and tribal life of primitive people.

Historically, lunar calendars belong to the infancy of the human race. The moon's phases were something that could be easily observed, that required no printed tables, no great effort and little imagination.

Moon calendars were reasonably adequate at this early stage of man's

development, when his outlook on life was restricted to his tribe and his immediate environment. The moon was the satellite that belonged to the planet earth. Primitive man had not as yet progressed to the greater knowledge that the earth belonged to a vast solar system of which the sun was the central and motivating force. The dim and lesser light of the moon had a limiting and also an emotional effect upon early man which encouraged magic, sorcery, superstition and taboo.

As civilization advanced and developed, the inadequacies of the moon reckoning became more and more apparent. The insertion of an occasional extra month to obtain agreement with the seasonal year became increasingly urgent and the method amazingly complicated. It was in the march of progress that non-seasonal moon calendars should give way to the sun calendar, which automatically recognized the indispensable seasons. It became increasingly evident that a sun calendar had to be separated completely from the moon if it was to be simple, useful and adequate. To serve two masters simultaneously is always difficult.

Moon-Month Calendar			
First month	30 days	Seventh month	30 days
Second month	29 days	Eighth month	29 days
Third month	30 days	Ninth month	30 days
Fourth month	29 days	Tenth month	29 days
Fifth month	30 days	Eleventh month	30 days
Sixth month	29 days	Twelfth month	29 or 30 days

Occasional Thirteenth month

(Twelve lunations equal 354.37 days)

◆◆◆ Chapter IV

WHERE FLOWS THE NILE

It flows through old hushed Egypt and its sands,
Like some grave mighty thought threading a dream.

—Leigh Hunt

HISTORY'S oldest fixed date, 4236 B.C., marks an epoch-making development in the calendar. This was the year when Egypt accepted the sun as the central influence in Time measurement. Its astronomers and wise men had developed a remarkably accurate solar calendar, the adoption of which is the first recorded event in the annals of the human race. By a bold enactment the calendar became completely separated from all lunar reckonings; moon-months were abandoned and the month became an inde-

pendent time unit, a convenient subdivision of a twelve-month solar year.

Professor Henry W. Breasted, the eminent American Egyptologist, was the first to call attention to the significance of this event, which he described as "the earliest date in the intellectual history of mankind." The Swedish historian M. P. Nilsson had already assembled impressive documentation to show that "the Egyptian calendar was the greatest intellectual feat in the history of time reckoning." The underlying motives of this development, he indicated, were "practical convenience and utility, as well as astronomical accuracy."

The early Egyptians were a superior people, masters of mathematics and practical science. They carved out a time pattern which (with a few modifications) is still in use today, almost 6,200 years later. Its originators were fearless undaunted pioneers in the recording of Time, far in advance of other nations. For many centuries, the Egyptians enjoyed the greatest civilization of their day. Living under clear cloudless skies that were bright with sunlight by day and brilliant with starlight at night, their astronomers made close and constant observations of the movements of the sun and other heavenly bodies. The pyramids, erected as monuments to illustrious rulers, were astronomical observatories by means of which they could study the skies, observe the shadows cast upon the earth, and make painstaking records of heavenly phenomena which enabled them to analyze and foretell climatic and seasonal changes.

It was highly necessary for the Egyptians to know in advance the date of the annual overflowing of the life-giving River Nile, upon which depended the fertility of their soil. Their people, then as now, were predominantly agricultural. The area of tillable soil was so restricted and the density of the population so great that any failure to take full advantage of the inundation meant famine and distress.

The astronomers discovered that the annual Nile flood appeared simultaneously with the yearly appearance on the morning horizon of Egypt's brightest star, Sirius or Sothis—the Dog Star. This occurred on the date which we know as July 19. The coincidence of the "three risings"—sunrise, the rising of Sirius and the rising of their great river—was an event of supreme importance to all Egyptians. The astronomers made it the basis of the calendar, for by a simple mathematical counting of days from the previous heliacal rising of Sirius, they could predict with sufficient accuracy the inundation of the Nile, and the whole nation could be prepared for it.

Their solar calendar had twelve months each of 30 days, making a year of 360 days. The months, mystically identified with the twelve constellations along the celestial equator (the Zodiac), were each subdivided into three "decads" of ten days. The arrangement of 36 decads within a year of twelve 30-day months is considered the source of the 360-degree circle

and its subdivisions, still used for measuring angles, by mathematicians, surveyors and navigators.

The Egyptian astronomers were of course aware that a 360-day year was too short and did not fully agree with the seasons. They corrected this discrepancy by adding five “extra” days at the end of every year as special feast days. This gave the year a total of 365 days, which was fairly accurate. Thus the Egyptians were not only the first people to adopt a solar calendar that recognized the seasons, but also the first to acknowledge the year as a complete and integrated unit of Time, within which the intermediary time units fitted perfectly.

Thomas Mann in his trilogy on Joseph tells in his first volume how this young Israelite was brought to Egypt and became fascinated with the “mystery of numbers” and the “divineness residing in measure.” He learned that the stations of the Zodiac were twelve in number, that the “moon number” was seven. He pondered on the mystery of the solar calendar of 360 days, supplemented by the annually inserted five-day period which brought the year to the necessary 365 days. He marvelled at the order, harmony and satisfaction of the calendar.

Egypt flourished under the stimulus of its newly organized civil time system. A primitive country with an unreliable economy became powerful and prosperous. Famines were less frequent. The way of life became simpler, easier and more orderly. Professor Breasted tells us that the adoption of the solar calendar “was the beginning of a great movement which carried over the thought of man from the world of nature to the world of human life.” It was an epochal step in the social and civil development of man that called for an audacious act of vision and conviction—but honest conviction always calls for audacity and courage.

Comparing the Egyptians with other nations of the same period, it has been observed that “when they discarded the lunar calendar and accepted the solar standard they gained a broader outlook and the beginning of a world awareness.”

This was strikingly apparent when about 1365 B.C. there appeared a remarkable ruler named Akhenaton (Ikhnaton). Under his dynamic rule man began to feel a thrill of universalism. He was “the first prophet of internationalism,” the first Egyptian to believe in a universal God for all mankind—the shining sun-god, the light of the world, to whom all creature

Egyptian Calendar: Every Month the Same

First Decade:	1	2	3	4	5	6	7	8	9	10
Second Decade:	11	12	13	14	15	16	17	18	19	20
Third Decade:	21	22	23	24	25	26	27	28	29	30

(Five additional days added at the end of every year)

and races of man belonged. His great hymn to Aton, the Sun, has come down to us in the 104th Psalm:

O Lord, thou art very great,
 Thou art clothed with honor and majesty
 And robed with light as with a garment
 Thou hast stretched out the heavens like a tent
 And made the clouds thy chariot,
 The winds thy messengers, fire and flame thy ministers.
 Thou dost cause the grass to grow for the cattle
 And plants for the service of man,
 That he may bring forth food from the earth.
 Thou hast made the moon to mark the seasons
 And the sun knoweth its going down.
 Thou makest darkness and it is night;
 The sun rises: man goes forth to his work
 And to his labor until the evening.
 O Lord, how manifold are thy works!
 In wisdom hast thou made them all:
 The earth is full of thy creatures,
 They all look to thee to give them their food in due season;
 When thou givest to them, they gather it up,
 When thou openest thy hand, they are filled with good things.
 When thou hidest thy face, they are dismayed,
 When thou sendest forth thy spirit, they are created,
 And thou renewest the face of the earth.

Three thousand years after the adoption of the Egyptian time system, Akhenaton's emphasis on the spiritual significance of the sun gave new meaning to the solar calendar and the vital part it exerted in the development, prosperity and world leadership of his country.

Yet the astronomers had come to know that the Egyptian calendar was not perfect. They had learned that the solar year was actually a quarter of a day longer than 365 days. Because of this discrepancy the time-star Sirius arose a day late every four years, so that eventually the Egyptian calendar revolved entirely around the solar year. Of course the priestly astronomers allowed for this error in their calculations of the seasons and in their predictions of the Nile floods. But it was an awkward arrangement.

To remove this incongruity, Ptolemy III in 238 B.C. decided to set the calendar right with the seasons. His proposal was to insert an additional day every four years to the group of the five year-end feast days. He ordered the change in an edict preserved on the famous Canopus Stone (discovered in 1886), in which he quaintly dedicated the extra day every four years to the "Good Doing Gods."

Notwithstanding Ptolemy's staunch support, the plan was defeated. Old custom was too firmly entrenched. The influential priest-astronomers opposed it as an encroachment on their prerogatives and the public through apathy and indifference let them have their way. Thus progress was thwarted and an illogical and unscientific pattern was perpetuated.

Two centuries later, Ptolemy's rejected proposition was enthusiastically adopted by the Roman ruler Julius Caesar, and the extra day became the quadrennial leap-year day in a more accurate solar calendar that immediately went into international operation throughout the far-flung dominions of the Roman Empire.

◆◆◆ Chapter V

RENDER UNTO CAESAR

Methods of measuring time grew up about the need for determining the dates of the tabooed or holy days, and for fixing and recording the occurrence of unusual natural phenomena which were believed to have some regular significance. . . . The perfection of the methods of measuring time has been a gradual transition 'from luck to mathematics'.

—Harry Elmer Barnes

OF ALL bizarre and primitive calendars, that of the early Romans reached the height of absurdity and confusion. It was an old tribal system, inherited by the legendary first ruler Romulus when he founded Rome in 753 B.C., later recorded as 1 A.U.C. (*anno urbis conditae*). This calendar consisted of ten lunar months, beginning with the spring moon in March and ending about 300 days later in December. The period between December and March was disregarded, being an interval of little importance because "nothing happened" during those slumbering cold dark 60 days.

In keeping with an ancient custom the origin of which had long been lost, the months were divided into three sections known as Kalends, Nones and Ides, each of different length. The word Kalends, meaning a "calling" or announcement of a new month, gave us the word *calendar*.

Romulus lived 34 centuries after the Egyptians originated and founded their remarkable solar calendar. It is one of the ironies of history that the early Romans had no knowledge of this achievement, which eventually they had to blend into their own system, but only after many centuries of struggle with their primitive tribal heritage.

The ten-month calendar was hopeless, having none of the elements of stability and regularity that a satisfactory system of time measurement requires. Romulus did nothing about it, probably because he was without knowledge of mathematics and astronomy. His successor, Numa Pompilius was more intelligent and scholarly, fully recognizing that the calendar needed improvement. In his long reign of 53 years he had ample time to become a constructive calendar reformer.

He increased the number of months from ten to twelve by adding January and February. The months were still lunar in character, their lengths alternating between 29 and 30 days. This gave the year 354 days but as the total was an even number and to the Romans this was unlucky, an extra 355th day was added at the end of the year.

Numa was advised by his astronomers that the extra 355th day would not be sufficient to agree with the seasons—which were important not only in agriculture but in military operations as well. To overcome this defect, Numa did what other calendar-makers have done, he inserted an additional thirteenth month every two years, calling it Mercedonius (from the Latin word for wages, indicating that it meant extra remuneration). This “remunerative” month of 22 or 23 days was arbitrarily thrust into the calendar toward the end of February, after the 23d, when the newly inserted month began. When it was finished, the remaining five or six days of February carried on. Of all the complicated man-made calendar adjustments in history, this was certainly the most fantastic.

Realizing that the awkward thirteenth month needed some authoritative supervision, Numa assigned it to the Pontifex Maximus, head of his newly created College of Pontiffs. He failed to realize that this would lead to all kinds of abuse—that the occasional 13th month would become a “political plum” which clever and unscrupulous officials could manipulate for their own purpose. By lengthening or shortening the intervals between intercalations, friends could be kept in power, enemies removed, dates advanced or postponed and all kinds of shady schemes promoted. And that is just what happened. Through the years such tampering with the calendar caused it to fall into chaos. The original intent to keep the calendar in line with the seasons was lost, so that in the first century B.C. the spring equinox had strayed from its place by about three months.

Meanwhile there had been other efforts which violated the calendar. About 300 B.C. a lawyer-politician named Cneius Flavius persuaded the people that all the months should have an odd number of days in order to make them lucky. February was the only exception; being the last month of the year it was unlucky, so it was shortened to 28 days. The result:

Lunar Calendar before Julius Caesar

March	31 days	7th month (September)	29 days
April	29 days	8th month (October)	31 days
May	31 days	9th month (November)	29 days
June	29 days	10th month (December)	29 days
5th month (Quintilis)	31 days	11th month (January)	29 days
6th month (Sextilis)	29 days	12th month (February)	28 days

355 days

The intercalary month Mercedonius—22 or 23 days—was inserted every two years before the last five days in February to adjust the lunar year to the seasons. A

Flavian cycle of four years had 355, 378, 355 and 377 days, giving an average of $366\frac{1}{4}$ days, or one day in excess of the seasonal year. If this had been meticulously followed from the time of Flavius to the time of Caesar, the Roman calendar would have been about 250 days out of step with the seasons, but actually the observance of the Flavian rules was irregular and indefinite, and historians have difficulty in assigning correct dates to historical events in these years.

Another political interference with the calendar came in 153 B.C. when the beginning of the year was changed from the spring equinoctial date to January 1st. The new date had no scientific or seasonal significance, but was the appointed time for newly elected consuls to assume their civic duties. The populace considered this event as appropriate for the beginning of a new year so that, first by custom and later by official enactment, January 1st became the new year—a political date.

One of the incongruous results (which is still with us) was that the month named Quintilis, or "fifth," actually became the seventh month; and so with all the other numbered months—Sextilis, September, October, November and December. Romans were so keenly conscious of this absurdity that it became a pastime of the emperors to re-name the six numbered months according to their individual whims. September was known at various times as Germanicus, Antoninus and Tacitus; November was Domitianus, Faustinus and Romanus. Fortunately none of these names lasted very long.

Julius Caesar was the great reformer who made the Roman calendar the standard of the Western world. He had experienced the irregularities and difficulties of the Roman system while he was a military commander in Gaul, so that when he arrived in Rome, calendar revision was one of his chief concerns. While in Egypt, he had learned about that country's superior solar calendar, which caused him to appoint the Greek astronomer Sosigenes of Alexandria, to be his chief adviser in revising the Roman system.

Caesar's authority to deal with this matter came through his election to the post of Pontifex Maximus in 63 B.C. After extensive studies, he put his new reform into effect in 45 B.C. The preceding year, 46 B.C., was one of the biennial periods which included the inserted month of Mercedonius. It became known as the "Year of Confusion." Caesar took the 355-day year with its inserted Mercedonius of 23 days and then added two more months making it 445 days long, a drastic operation which brought the calendar into step with the seasons. (The two added months were Undecember, 33 days, and Duodecember, 34 days.)

Then came the year 45 B.C. and with it Caesar's new time-plan. He was wise in accepting without hesitation the Egyptian solar year of 12 months, with two changes. He distributed the last five days of the year (a festival period in Egypt) more evenly throughout the calendar, and he

adopted Ptolemy's previously rejected extra leap-year day ("Good Doing Gods") by adding it to February every four years. The calendar was fixed at 365 days in ordinary years and 366 days in leap years. In recognition of this outstanding reform a grateful Senate honored Julius Caesar by renaming his birth-month Quintilis, July.

As compared with the Egyptian system, Caesar's adaptation was a considerable improvement. The reduction of the intercalary period from five days every year to one day every four years lifted the Roman calendar into a new level of efficiency and convenience. It was obvious to the scholarly Sositogenes that the shorter the period of intercalation, the better the calendar.

The new leap-year day was inserted after the 23d of February, where the 13th month of Mercedonius had been previously intercalated. Thus the 24th of February—in Roman terminology "the 6th day before the Kalends of March"—was repeated in leap years and became a double-six or bissextilis. This is the origin of the term bissextile given by Europeans to the leap-year day. Speaking historically, the added day in our present leap years is actually the old "double" 24th of February—which makes the month 29 days long instead of 28.

Two Latin historians, Censorinus and Macrobius, explain the operation thus: "To the old calendar of 355 days Caesar added ten days in order to make it a solar calendar. To January, March, May, Quintilis (July), Sextilis (August), October and December he gave each 31 days; and to April, June, September and November each 30 days. But February, the unlucky month of Terminalia, was left unchanged, "so that the religious rites of the gods of the nether world might not be disturbed." In this manner Caesar gave to seven months 31 days (the lucky odd number) and to four months 30 days (the unlucky even number).

The arrangement of the 31-day and 30-day months was not as regular and simple as it might have been, but presumably this did not particularly concern Caesar. We are historically quite certain that the arrangement of the months was as we have it today.

A different version of his calendar plan was published in the 1830 edition of *Encyclopædia Britannica*, and gained wide currency before it was disproved many years later by the evidence of newly discovered inscriptions. This theoretical reconstruction of Roman history suggested that Julius Caesar set up an improved arrangement of the months, with alternating months of 31 days and 30 days, and that his arrangement was altered by his successor, Augustus, in order to give August as many days as July. The reason for the change, said *Britannica*, was Augustan vanity.

But such a foolish gesture of vanity is out of character in one of Rome's greatest and most far-sighted emperors, and the accusation against him was rejected when Italian archeologists uncovered monuments with inscriptions

clearly showing that Sextilis had 31 days before it was renamed August.

Caesar did not pretend to have given the world a perfect calendar. All he claimed was that his plan was a great improvement on what had gone before. He established a solar calendar that recognized the seasons within a fixed and complete year, a worthy follower of the more ancient Egyptian solar calendar.

He did not disturb the awkward division of the months into Ides, Nones and Kalends, although he must have been keenly aware of the superiority of the Egyptian arrangement of subdividing the months into three decades. Nor did he change the beginning of the year to a seasonal point, the spring equinox or the winter solstice.

This latter improvement he had clearly in mind, but he was deterred from carrying it out because in 45 B.C. the first of January occurred on the new moon—and it was the new moon, still in high favor with a superstitious populace, that made him compromise and leave the New Year alone. Many astronomers and historians have pointed out certain advantages that would have resulted had Caesar placed the beginning of the calendar year on a really scientific basis.

Perhaps Caesar would have carried his reform further had he lived longer. He was assassinated on the Ides of March, a few months after the new calendar came into use.

During the years that followed, the unfamiliar leap-year rule was misinterpreted by the College of Pontiffs. Instead of inserting an extra day every four years, they observed leap year every three years. This caused the calendar once again to shift from its seasonal moorings, and it was Caesar's nephew, the Emperor Augustus, who undertook to correct the error. He cancelled all leap years between 8 B.C. and 8 A.D., and directed that thereafter all leap years should fall as originally intended. Once again the Roman Senate gave honor to a calendar reformer by renaming Sextilis, August.

This pattern continued to be observed until it was readjusted in 1582 by Pope Gregory XIII.

Calendar after Julius Caesar
(Solar Year of $365\frac{1}{4}$ days)

January	31 days	July (Quintilis)	31 days
February	28 or 29 days	August (Sextilis)	31 days
March	31 days	September	30 days
April	30 days	October	31 days
May	31 days	November	30 days
June	30 days	December	31 days

365 or 366 days

◆◆◆ Chapter VI

CONSTANTINE AND THE WEEK

Upon the first day of the week, the
disciples came together to break bread.

—Acts 20:7

CONSTANTINE, a Roman Emperor who has been called “a great historical phenomenon,” was a constructive statesman of boundless energy and daring, who saved a tottering empire and gave it a new lease of life. He came to the throne from distant Britain, where his father had set up a capital at York to govern the tributary provinces of Western Europe, including the areas which are now France, Spain, Germany, Scandinavia and the Low Countries.

His interest in the calendar came by way of his tolerant attitude toward the Christians, who were a valuable part of his military and civil personnel. In Rome, the Diocletian persecutions of the Christians had reached a climax of inhuman cruelty, but Constantine was never a participant. Boldly taking the opposite side, he marched into his decisive battle against Rome with the cross of Christ on his banners and an inspired motto that “by this sign you will conquer.”

As Emperor, he did not make Christianity the sole religion of the state. To the end of his days, he bore the title Pontifex Maximus as chief priest of the ancient pagan Roman hierarchy. But at the same time he gave Christianity complete equality with the traditional official worship. The coins which he issued carry both the cross and the images of Mars and Jupiter. Personally, he leaned more and more toward the Christians and on his death bed became one of them.

He had always been impressed with their ideas about the calendar. He liked their observance of a seven-day week, with the *first day* set aside as a day of rest and worship. The week was a complete novelty to the Roman calendar, which had its months subdivided into the impractical Nones, Ides and Kalends.

Nine years after Constantine became Emperor he issued an edict introducing the seven-day week into the Julian calendar. The weekdays had no names but were known only by numbers. The week displaced the old Kalends, Nones and Ides, and eventually the days acquired the names of the seven important heavenly bodies—Sun, Moon, Mars, Mercury, Jupiter, Venus and Saturn.

Unfortunately, Constantine in introducing the week did not give the

matter the full scientific consideration it deserved. He did not realize that he was removing from the Julian calendar the *perpetual* characteristic which had been one of its chief merits. Julius Caesar had established a calendar that was exactly the same year after year; even the bissextile observance in leap year did not disturb the perpetuity of the calendar. But now, with the new seven-day week gradually gaining outstanding importance in time-measurement, the Roman calendar lost this desirable perpetual feature. The weekdays rotated, and every year became different from the preceding and following one.

The change must have been annoying to the Romans and all their satellites, from Britain to India, because the monumental permanent calendars which had been erected in every part of the empire—carved in stone—had now become useless. In adopting the week, the imperial authorities had not given any consideration to the fact that $52\frac{1}{7}$ weeks within a 365-day year would involve difficult adjustments and recurring confusions. They carelessly thought of the year as 52 weeks; but the period of 52 weeks was always short a day to complete a true solar year—so at the end of each year a day must be borrowed from the first week of the next year. The New Year could never begin consecutively on the first day of the week. The convenient perpetual calendar was lost.

Had Constantine foreseen the effect of his action, he probably would have made adjustments. The device of intercalation was familiar in many regional calendars of the contemporary world; for example, in Egypt, Greece and Palestine. He might easily have hit upon the idea of a supplementary day without a weekday name, and thus he could have preserved the entity of the year which had been so carefully maintained in the Egyptian and Julian systems.

Thus the wandering week became the chief difficulty with the calendar, a serious defect that has continued ever since, and one that will be remedied at long last with the adoption of The World Calendar.

The origin of the week is historically a question that goes back further than any existing record. It was introduced into Palestine from the Assyrians, who used the seven weekdays as symbols for the seven heavenly bodies which were the basis of their astrology. The astrological belief was that each hour of the day was governed by a different "planet," in the order of their supposed distance from the Earth—Saturn, Jupiter, Mars, Sun, Venus, Mercury and Moon. The "planet" which governed the first hour of the day was called its *Regent*. If the Sun is regent for the first day, then the regents for the following days are: Moon, Mars, Mercury, Jupiter, Venus and Saturn—the same order of days that we observe in the week today. (In the Teutonic languages we have replaced the midweek deities with their counterparts—Tiu, Woden, Thor and Freya.)

But further back than the Assyrians, it is probable that the seven-day

week was related in the earlier lunar calendars to the four phases of the moon, each about seven days in duration. Actually there were several kinds of “weeks” used in ancient times. The early Romans observed an eight-day market week; other tribal and primitive people had market weeks of four, five or six days; the Egyptians and Greeks divided their months into ten-day periods.

Whatever its origin, the week with its one day of spiritual observance has proved itself a highly valuable time unit of profound significance and real benefit to the human race. Through Constantine’s decree the week received its right beginning Sunday, observed by the Christians in commemoration of the Resurrection and the right ending Saturday, honored by the Jews and Seventh-Day Adventists as the sacred day of rest, with Friday, the religious day of the Moslems, the Hegira, when Mohammed was forced to flee from Mecca. Even those for whom the week has no religious connotation would not think of abandoning the week, an interval of Time that fits perfectly into the spiritual and practical living of peoples everywhere. The inherent benefits of the day of rest and worship are universally recognized. Mankind and the calendar are enriched and ennobled with its observance.

Constantine’s Introduction of the Week
in 321 A.D. changed the stable Roman Calendar (every year the same) into
a variable system, in which every year was different:

January 321							January 322							January 323						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7		1	2	3	4	5	6			1	2	3	4	5
8	9	10	11	12	13	14	7	8	9	10	11	12	13	6	7	8	9	10	11	12
15	16	17	18	19	20	21	14	15	16	17	18	19	20	13	14	15	16	17	18	19
22	23	24	25	26	27	28	21	22	23	24	25	26	27	20	21	22	23	24	25	26
29	30	31					28	29	30	31				27	28	29	30	31		
January 324							January 325							January 326						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4						1	2							1
5	6	7	8	9	10	11	3	4	5	6	7	8	9	2	3	4	5	6	7	8
12	13	14	15	16	17	18	10	11	12	13	14	15	16	9	10	11	12	13	14	15
19	20	21	22	23	24	25	17	18	19	20	21	22	23	16	17	18	19	20	21	22
26	27	28	29	30	31		24	25	26	27	28	29	30	23	24	25	26	27	28	29
							31							30	31					

These presentations of the calendar in Constantine’s time are, in a sense, merely theoretical. The division of the months by Ides, Nones and Kalends was dropped during the Middle Ages.

◆◆◆ Chapter VII

GREGORY'S CONTRIBUTION

The time is out of joint; O cursed spite,
That ever I was born to set it right!

—Shakespeare

AFTER Constantine, 1,250 years passed before there came another change in the calendar. It was in 1582 that Pope Gregory XIII undertook the revision which is now in general use.

In the intervening medieval centuries (between the fifth and sixteenth) there were a number of important events which had a lasting impact upon Western civilization. The reign of Charlemagne in the eighth and ninth centuries brought together in a new unity many of the Northern peoples of Europe. The Arabic contributions to the West in the fields of science, mathematics, art and education reached their peak in the tenth century. The Norman invasion in the eleventh century thrust the islanders of Great Britain into the European arena. The eight Crusades between the eleventh and thirteenth centuries gave Europe a closer contact with the Near East. The Magna Carta of the thirteenth century freed Englishmen from feudal lords and barons. The Gutenberg printing press of the fifteenth century led to a broader dissemination of learning. The discovery of America in the fifteenth century stimulated almost every phase of human activity in the Old World. The Reformation of the sixteenth century lifted men's conscience from the domination of state religions. Everywhere there were driving forces urging mankind forward toward new freedoms, broader knowledge and greater unity.

The calendar of Caesar and Constantine, with its irregularities and deficiencies, could not escape these forces. As early as the thirteenth century there were scholars and public officials who complained that the calendar year was drifting away from the seasons, because under Caesar's four-year rule too many leap years had been inserted. The resultant difficulties were repeatedly called to the attention of rulers and popes, but nothing was done until the latter years of Gregory's occupancy of the pontifical throne.

The aging Pope, weary of wars and public works and financial difficulties, turned his attention at last to the calendar. Aided by a notable staff of scientists, he analyzed the problems. *First*, how could the year be brought back into accord with the seasons? *Second*, how could the leap-year rule be corrected to stop further dislocation? *Third*, could the beginning of the year be set in a fixed position, instead of being observed at different times

by different peoples? *Fourth*, could anything be done about the wandering Easter, a cause of considerable inconvenience?

The Easter question was actually the source of the Papal intervention. Easter was a spring festival, but the "drifting" of the calendar had been gradually pushing it further and further away from the spring equinox. Eventually, if not corrected, Easter would be arriving in the winter, and this would correspondingly dislocate all the other important feasts which depended on it. Julius Caesar had kept the equinox on the ancient date of March 25th; in Gregory's time it was falling on the 11th.

The error in Caesar's leap-year rule was readily understood. The Roman Emperor had figured the solar year at $365\frac{1}{4}$ days. Actually it takes the earth but 365 days, 5 hours, 48 minutes and 46 seconds to complete its annual journey around the sun. The true year is thus 11 minutes and 14 seconds short of six hours—a quarter of the 24-hour day. This slight difference, accumulating through the centuries, had been sufficient to put the calendar 14 days off balance with the seasons.

Pope Gregory and his scientists decided to deal with the first of their four calendar problems by dropping a certain number of days from the year 1582. On the question of "How many days?" they worked out a compromise. Not the full 14 which would have brought things back to Caesar's formula, but only ten days, which adjusted the equinoctial date to March 21st, where it had been observed at the time of the first Christian conclave at Nicea in 325 A.D. The use of Nicea as a starting point gave an ecclesiastical touch to the whole operation.

As to Problem Number Two, the new leap-year rule, skillfully formulated by the Pope's advisers, related only to century years. Those which were divisible by 400 were to be leap years; all the others were to be ordinary years, such as 1700, 1800, 1900. The years 1600 and 2000 are leap years. Outside of centurial years, all the other years keep to the simple four-year rule as prescribed by Caesar. Thus three leap years are dropped out of each 400 years, and this simple formula will keep the calendar approximately correct with the seasons for about 3,300 years.

Problem Number Three was concerned with a stable New Year's Day. For many centuries, the New Year had been the most wayward of anniversaries. Julius Caesar had accepted January 1st, but in the sixth century the Church had adopted March 25th, the Feast of the Annunciation, which mystically recalled the birth of Christ. During succeeding centuries, this was a widely observed date, although all kinds of variations occurred from time to time. Germany and Spain thought the year should begin at Christmas, Denmark used an August New Year's Day, France and the Netherlands observed Easter. In Venice the date was March 1st, in Ireland February 1st.

To remove all the confusion Pope Gregory came out firmly for Janu-

ary 1st. He ignored the pagan origin of this date, and gave it ecclesiastical standing by pointing out that it was the Feast of Circumcision in the church calendar. His scientific advisers probably pointed out that the first of January had a certain astronomical basis: the "perihelion" occurs on or about the beginning of January, when the earth is closest to the sun—being 91,500,000 miles away, as against 95,000,000 miles six months later.

Then there was the question of stabilizing Easter. The wandering character of Easter is due to the fact that it is tied to a lunar reckoning; theoretically Easter comes on the first Sunday after the full moon following the spring equinox. Here is a basic contradiction. The civil calendar goes by the sun; the religious feast day Easter is reckoned by the moon. No compromise is possible, for the result must be either one thing or the other.

There appears to be no reason why Easter cannot be observed on the Sunday nearest to the historical date of the Resurrection, presumably April 9th. Gregory and his advisers attempted no such change. They left Easter as it was, and the result is a wandering festival which causes great inconvenience in countries where Easter is important in civil life.

The Gregorian revision went into effect immediately in 1582 in all Roman Catholic countries. Ten days were dropped from October: Thursday, October 4th, was followed by Friday, October 15th.

Outside the strictly Roman Catholic countries, there were long delays in recognizing the scientific advantages of Gregory's proposals. Protestant Germany and Denmark adopted the new calendar in 1700; Great Britain and the American colonies in 1752, Sweden in 1753, Japan in 1873, China in 1912. Russia and the Eastern Orthodox countries were tardiest of all.

The hesitancy of the Northern nations to accept the Gregorian reform was due to the violent religious prejudices which had followed, aroused by the Reformation. In the Eastern Orthodox area, too, the scientific nature of the reform was minimized and the priesthood feared that acceptance would be interpreted as a quasi-allegiance to a faith different to their own.

In other parts of the world, particularly in the Asiatic countries, the new system was labelled the "Christian Calendar" and its name created resistance among Hindus, Moslems, Buddhists, Taoists and other powerful groups.

These unfortunate reactions had not been foreseen by Gregory XIII and his advisers, who had expected that the revision would be accepted as a sound scientific action, without religious connotations. It did not work that way. For more than a century, his calendar was held up as a symbol of Papal domination, and this caused the Roman Catholic Church a considerable amount of annoyance and trouble. It is one of the reasons why, in the present age, the Vatican has been reluctant to take any *initiative* in the movement for a further improvement in the calendar.

The Gregorian reform was good up to a point. It anchored the calendar

into the seasonal year from which it never should have strayed, and it established a uniform practice as to the year's beginning. However, it failed to touch Caesar's faulty arrangement of months, quarters and half-years; and it did nothing to harmonize the wandering weekdays which were an inheritance from Constantine. These two faults are becoming increasingly burdensome with the development of civilization and the requirements of our modern world.

There is no doubt that Gregory's able scientific advisers pointed out these defects. Such competent men as Lilius, Clavius and Scalliger could not have failed to realize the situation. The Pope's viewpoint, however, was strongly ecclesiastical: his primary concern was to make certain that the inconveniences of the church calendar were remedied, and he may have felt that any further action would endanger the simpler program he had in mind.

The Gregorian reform left the calendar still inadequate. There was no regularity in the arrangement of the months; the quarter-years varied from 90 to 92 days in length; the half-years were ridiculously unequal. The weekdays continued to wander from year to year, so that people actually had to use 14 different calendars and 28 different kinds of months. A new calendar had to be prepared and printed every year. The order, stability and comparability which only come when the year is one complete unit, such as the Egyptians and Julius Caesar had installed, were totally absent. The ideal of a perpetual and balanced measuring system of Time had to wait until the present twentieth century, when the pressures of science, business and a need for world unity would make imperative a further scientific simplification and perfection of the civil calendar.

It is a remarkable historic coincidence that at the very time when Gregory was wrestling with European calendar problems, the same sort of thing was happening in India. That faraway country was enjoying the beneficent rule of Akber, greatest of the Mogul (Mongol) emperors and one of the most eminent royal personalities of all time. Much of his work of consolidation and organization in India survives to this day—and part of it involved an effort at unifying the Indian calendars.

Although Akber was unquestionably the greatest world figure of his century, he had to live within his limitations. One of these handicaps was that he knew practically nothing about the Western world except through a few contacts with Jesuit missionaries. His religion was a narrow form of Mohammedanism, which was a minority sect in India—even then a kaleidoscope of religions. In searching for an improved calendar, he never thought of consulting Europe and probably never heard of the Gregorian reform of 1582. Instead, he turned to Persia and its Jelali solar calendar, which he brought to India in 1584. It was one of the best of all solar calendars, with an even better approximation of the actual astronomical year than the Gregorian system.

Unfortunately Akber's reform measure was misunderstood, and after his death, in the absence of any central guidance, it became combined with ancient errors and local variations. Thus his main purpose of providing a national calendar was defeated. But it was a worthy attempt, and the broad vision which inspired it has always been recognized in India, and is indeed the foundation for the present movement under Nehru's leadership.

The world of today would be a better world had Akber and Pope Gregory joined forces in the 1580s. They would have emerged with a worldwide calendar, which would have drawn together the East and the West; and the result would have been a powerful vehicle for international cooperation and understanding, an ever-present antidote for narrow sectarianism and isolationist nationalism.

Gregorian Calendar (Weekday arrangement varies each year)			
January	31 days	July	31 days
February	28 or 29 days	August	31 days
March	31 days	September	30 days
First Quarter	90 or 91 days	Third Quarter	92 days
April	30 days	October	31 days
May	31 days	November	30 days
June	30 days	December	31 days
Second Quarter	91 days	Fourth Quarter	92 days
(First half-year 181 or 182 days; second half-year 184 days)			

◆◆◆ Chapter VIII

DEVELOPMENTS IN ISRAEL

Day unto day uttereth speech, and
night unto night showeth knowledge.

—Psalm 19:2

TWO ancient calendars still influence our civilization, the Egyptian and the Jewish. Egypt gave us the solar seasonal year, establishing it on a sound astronomical basis which is the foundation of our present Gregorian system. The Jews gave us the week, with the deep spiritual satisfaction of a regular seventh day consecrated to rest and worship, now increasingly observed throughout the world.

The Jewish calendar in its entirety still survives among the Hebrew

people and is the official civil system of the new state of Israel. Historically it is the result of a long series of revisions and adjustments, with important lessons for modern students of calendar reform.

The principal features of the Jewish calendar as it exists today are: It reckons the years from 3761 B.C. (October 7 at 8:11 o'clock), a conventional starting point representing the Creation; it regards the day as beginning at sunset, which for convenience is supposed to be 6 p.m., Standard Time (but in Jerusalem it is Jerusalem time, 2 hours and 21 minutes off Greenwich); the New Year comes in the autumn, either in late September or early October; the years consist of 12 months of alternating 29 and 30 days, with a 13th month inserted seven times in every 19 years; the Sabbath is observed at the end of the week, starting at sunset on Friday and continuing until sunset on Saturday, when a new week begins; until recently, the Jews had their own method of subdividing the hour into 1080 "parts" and each of these parts into 76 "moments"; the names of the months are of Mesopotamian origin and some of them perpetuate pagan deities.

The evolution of this calendar system has been intensively studied for many centuries, although the basic historical material is often fragmentary and incomplete. However, it is clear that the earliest Jewish calendar was purely lunar, with 12 months of alternate 29 and 30 days. With advancing civilization came the need for putting the lunar calendar into a seasonal pattern. As with other ancient peoples, a 13th month was intercalated in various ways, often at the whim of rulers or religious leaders. Strangely, the Old Testament does not mention any intercalated month or its equivalent.

The months at first were numbered, but eventually they took on the Babylonian names, which they still bear today. The intercalated 13th month was taken over from the Babylonians but the method of inserting it and the order of the occasional 13-month years was a matter of slow and gradual development over a period of many centuries.

Actually, the present-day rule for inserting the 13th month was not formulated until 358 A.D., when Rabbi Hillel II devised a permanent program on the basis of a 19-year cycle, wherein the seven years of 13 months are the 3d, 6th, 8th, 11th, 14th, 17th and 19th. The thirteenth month follows the month of Adar and is called Veadar or Adar-Beth.

In current practice, the 12 "ordinary years" of the 19-year cycle may contain 353, 354 or 355 days, known respectively as common deficient, regular and abundant years, whereas the seven "leap years" may contain 383, 384 or 385 days, the embolismic deficient, regular and abundant years. Thus the Jewish years are of six different lengths.

In the days of Moses in Exodus, the year began in the spring month of Abib (subsequently called Nisan). This was changed later to autumn and the month of Tishri. In the period of the Patriarchs, the day began at sunrise. This was changed to sunset during the fourth century B.C.

There were equally drastic changes in the observance of the week. The early history of the Jewish Sabbath and the seven-day week is somewhat obscure. Predecessors of the ancient Jews (for example, the Chaldeans) considered the 7th, 14th, 21st and 28th days of the month as of ill omen, unsuitable for important enterprises, so that men feared to work on those days. The Hebrews observed these seventh days as days of rest, bestowing on them a spirit of sanctity and removing all associations with evil.

This conception they added to the Canaanite solar calendar which was in use by their neighbors, along with their own tribal festivals. But in that stage of civilization, calendars were not too definitely fixed or anchored. Changes were made to fit emergencies, and the prevailing system could be freely altered.

It is significant that in the first 65 chapters of the Old Testament, periods of seven days are frequently noticed; but after the narrative of the Creation, no Sabbath is mentioned until the great religious leader Moses speaks to his people in the desert. Obviously there had been no strict adherence to the Sabbath observance in former times. Moses established the sacred seventh day and gave it emphasis as a preeminent feature of religious life and worship, which he strengthened further when he made it one of his Ten Commandments.

His first effort to fortify the Sabbath observance came, according to Exodus, as the result of the miraculous gift of manna from Heaven. The manna was gathered every day for five days and a double portion on the sixth day; then the Hebrews were commanded to rest and worship on the seventh day. In this manner Moses gave his people a dedicated Sabbath endowing it with divine authority.

During the Mosaic era, a radical change in the calendar came into effect. "Pentecontad" periods of 50 days were devised. Each period contained seven weeks of 49 days that included seven Sabbaths, with an extra 50th day as a special "offering to the Lord," always observed as the closing day of each pentecontad period. This calendar was in use in Palestine for many centuries.

It was at a much later date, during the Babylonian captivity, that the pentecontad plan with its special 50th day was abandoned and a regular *invariable* seventh-day Sabbath was substituted, with the Babylonian luni-solar calendar as its background and framework. At this time the Jewish religious leaders formulated their theory of the "unbroken continuity of the seven-day week," maintaining that their new system had started with the Creation and emphasizing the divine origin of the Sabbath. The Sabbath for the first time became identified with the idea of the unbroken continuity of the weeks.

"It was in the Exile," writes Dr. Harry Emerson Fosdick in his *Guide to Understanding the Bible*, "that the story of creation was brought to its climax

in the admonition to keep the Sabbath, made sacred from the world's foundation. It was in the Exile that the laws were rewritten and codified stressing Jewish differentials."

Judaism from Babylon onward has maintained consistently its own religious calendar and its own concept of the unbroken continuity of the week. One of the foremost Jewish historians significantly points out, "The present Hebrew calendar is a direct heir of ancient Babylonia, just as the present Gregorian calendar is a direct heir of ancient Egypt."

Months of the Jewish Year

1 Tishri	30 days	7 Nisan	30 days
2 Heshvan	29 or 30 days	8 Iyar	29 days
3 Kislev	29 or 30 days	9 Sivan	30 days
4 Tebet	29 days	10 Tammuz	29 days
5 Shebat	30 days	11 Ab	30 days
6 Adar	29 or 30 days	12 Elul	29 days
Veadar or			
Adar-Beth	29 days		
(occurring only in leap years)			
		353, 354 or 355 days	in common years
		383, 384 or 385 days	in leap years

◆◆◆ Chapter IX

REALM OF THE CRESCENT

I fear this iron yoke of outward conformity
hath left a slavish print upon our necks.
—John Milton

THREE hundred million Mohammedans—concentrated in a dozen countries of the Middle East and adjacent parts of Asia and Africa—still use a primitive lunar calendar, that was inaugurated in Arabia several years after the Prophet's death in 632 A.D.

Mohammed had thus no part in installing this calendar reform. It was done by his *Companions* in an effort to carry out what they thought was in his mind, guided by a single obscure passage in the Koran.

The pressing need for a Moslem calendar arose out of the surprisingly rapid expansion of Mohammedanism immediately after his death. In less than seven years the tribesmen of Islam swept the decadent Roman Empire out of Asia Minor and gained control of such remote and renowned cities as

Antioch and Damascus. Bound together by a fighting creed, they developed a strong conviction of invincibility. Their religious unity required formulation and stability.

To understand the background of their calendar, it should be remembered that Mohammed's public career was fairly brief: only 23 years elapsed between the day when he first appeared as a religious leader and the time of his death. His spiritual aim, as he stated, was a "restoration of the religion of Abraham," with emphasis on the unity of God and on the future life.

During his lifetime, the tribesmen around Mecca and Medina used a luni-solar calendar on the Hebrew pattern, in which a 13th month was intercalated every two or three years to adjust the lunar months to the seasons. Responsibility for the intercalation rested with a family of astronomers known as the *Qalamas*. The 13th month was placed at the end of the year.

The Arabs also observed an ancient religious custom, steadfastly adhered to, of having four sacred months—the first, seventh and the last two months of every year. The intercalation of a 13th month between two sacred months (the last and the first months) brought about a great deal of disturbance. Should the intercalary month be observed as another sacred period? Or should it be regarded as an ordinary month and allowed to interrupt the religious observances?

Mohammed experienced all this confusion, and being solicitous for the spiritual and physical welfare of his people he felt that the combination of intercalation and postponement led to error. It was a real tragedy to Islam that he did not live to clarify this situation. Possibly he was preparing to take up the calendar when death intervened.

Just before his death he proclaimed through a verse of the Koran: "Twelve months is the number of months ordained by God, according to God's book. . . . Any 'nassi' is the cause of confusion." Nobody knew exactly what the Prophet meant by the latter phrase. The word "nassi," translated by various authorities as *postponement*, *transferring* or *carry-over*, can hardly be translated as *intercalation*. But after him his *Companions* gave it that interpretation, and installed a purely lunar calendar.

Of course the "year" of twelve lunations and 354 or 355 days bears no relation whatever to the solar year. Therefore the Moslem lunar calendar wanders through the seasons and returns to its original position after a period of about 33 years. A Moslem who according to his calendar says he is 34 years old is actually only 33 years old by the Gregorian reckoning.

This purely lunar calendar led later generations of Moslems to strange dilemmas and inconsistencies, for the simple reason that while the lunar calendar may meet the requirements of the simple Bedouin living in desert isolation, it raises many difficulties when facilities of communication establish larger units of population.

For example, a new moon may be seen by one clan and not by another living ten miles away: the next day therefore becomes the first day of the succeeding month for the first clan while it remains the 30th day of the current month to the other.

To remove this anomaly the intellectuals of later generations, when the influence of Islam expanded, found themselves between the meanings ascribed to the word of God on the one hand and the clearly ascertained laws of God on the other. They were forced to prescribe that the first month of each year, Muharram, should be assumed to have 30 days and the second month 29 days and so on alternately throughout the year, except for the last month which in 11 out of 30 years has 30 days instead of 29.

They implied that this assumption was to hold good irrespective of whether the moon was seen on the 29th or 30th, but they did not dare to clarify this implication because it would go against the prohibition of intercalation *ascribed* to the Koran.

But the orthodox saw through this implication and refused to accept the formula. For them the length of each month of the lunar calendar consisted of 29 or 30 days, not alternately, but depending upon whether or not two reliable men had *seen* the new moon on the evening of the 29th or 30th.

In recent years scholars have been insisting that the interpretation forbidding intercalation is incorrect and that in all probability Mohammed intended the adoption of a twelve-month seasonal calendar of the type used by Rome and other Christian nations.

Whether Mohammed's immediate successors were right or wrong, they burdened all Islam with a strictly lunar calendar that has caused endless difficulties, sufferings and harassments.

One of the more important handicaps of the wandering calendar has been its effect on the annual Hajj or pilgrimage to Mecca. The rites of the Hajj, prescribing bare-headedness and the wearing of only two pieces of cloth, could only have been meant for a time of year when it was neither too hot in the day nor too cold at night. But, because the Hajj rotates in a lunar calendar through even the hottest and coldest months, thousands of pilgrims have suffered the rigors of the extreme climate of Saudi-Arabia.

In 1953 the annual pilgrimage, always in the twelfth and last month of the year, came in midsummer. Ahmad Kamal, in the *Saturday Evening Post*, wrote that the heat ranged between 116 and 127 degrees, and on one day the mercury climbed to 142 degrees, causing the death of 4,411 pilgrims on that day alone. And all this tragic loss of life was due to the non-seasonal moon calendar!

"It is obvious," writes Mohammed Ajmal Khan, "that the Prophet wanted the Muslims to follow the custom of the Christians in the matter of the calendar, so that the Hajj should fall in the month of March—near the Christian Easter, the Jewish Passover, the Iranian Navroz and the Hindu festival of

Holi. If this had been done, the Islamic message of peace and goodwill would have been better understood and there would have been no crusades, no bloodshed in the name of religion, and no ill-will in the name of Islam."

Another well-known authority, Dr. Hashim Amir Ali of Osmania University, says: "And there *are* really only twelve months in God's calendar ever since the earth began to revolve around the sun in its present orbit. The two solstices and the two equinoxes divide the cycle of the year into four periods and in each of these a season begins, reaches its zenith and declines—making twelve sub-seasons in all. These may be called by any name one likes. The Koran only emphasizes this fact in Nature—and man's incorporation of it in his calendar is a testimony of his attempts at abiding with God's creation."

These are matters which are of increasing concern to the Moslem religious authorities. But they do not fall within the province of the United Nations in its efforts to improve the present international *civil* calendar.

All Moslem countries use the Gregorian calendar in their international relationships. Its datings are widely employed in commerce, and most Arabic newspapers are double-dated. The Gregorian system is an alternative, generally recognized by law. The Moslem calendar is primarily for religious use; the Gregorian system is of course civil in its function.

Nobody at the United Nations has the remotest intention of touching in any way upon religious calendars, whether they be Christian, Jewish, Moslem or Hindu. Such changes, if they come at all, must be made by the properly constituted religious authorities.

The international civil calendar, however, is a matter on which all nations can agree. The Arab states are as interested as any others, in improving the present system, to give it greater accuracy, utility and universality.

A statement from a Moslem representative of the government of India says: "The universal calendar proposed by The World Calendar Association is very useful indeed, and no religious question arises against its adoption. The lunar calendar was proposed for all the religious functions of Islam because its knowledge is possible for everyone naturally. Muslims will carry it on for their religious purposes, but for all other purposes and especially for government administration, the new reformed calendar should be adopted."

Months of the Mohammedan Year

1 Muharram	30 days	7 Rajab	30 days
2 Safar	29 days	8 Shaban	29 days
3 Rabia I	30 days	9 Ramadan	30 days
4 Rabia II	29 days	10 Shawwal	29 days
5 Jumada I	30 days	11 Zu'lkadah	30 days
6 Jumada II	29 days	12 Zu'lhijjah	29 days*

* In leap year, 30 days

354 or 355 days

◆◆◆ Chapter X

CENTURY OF PREPARATION

New times demand new measures and new men;
 The world advances, and in time outgrows
 The laws that in our fathers' day were best.

—James Russell Lowell

MODERN calendar reform was initiated in 1834 by an Italian priest, Abbé Marco Mastrofini. In that year he published a scholarly book with the impressive title *Amplissimi Frutti da Raccogliersi sul Calendario Gregoriano Perpetuo*—which may be freely translated “Final Results of Research on Perpetualizing the Gregorian Calendar.” The volume was fortified by the Church with three *Nihil Obstats* and two *Imprimaturs*.

The Abbé proposed a year of 364 days—beginning with Sunday, January 1st, and ending with a 365th “extra-calendrical” day, to be called *feria octava* (the holy day or the eighth weekday). In leap years there would be another extra day (to be placed either after February, as in the Gregorian calendar, or immediately after *feria octava*) which would be called “intercalary day.” Mastrofini was thus the great pioneer for the one or two stabilizing days which calendar reformers subsequently have adopted.

A recent Catholic writer points out: “The only detail in which he did not anticipate proposals like the modern World Calendar was in regularizing the length of the months and making the quarters equal. But these are, after all, lesser details. Mastrofini originated the basic idea of all modern reform, the stabilizing days. For this momentous suggestion he has not been adequately honored by the world.”

Fifteen years after the publication of Mastrofini's book, the great French philosopher Auguste Comte used the intercalary days in his plan for a 13-month “Positivist Calendar,” as part of a vast scheme for human betterment.

In 1882 and 1884 the Mastrofini proposal was revived and enthusiastically advocated by Bishop Nicoro of Como and Abbé Croze of Paris, but without much public response.

In fact, no organized campaign for calendar reform developed until 1887, when the French astronomer Camille Flammarion, as president of the new Astronomical Society of France, initiated an ambitious contest for the most practical plan of calendar revision. The two prizes were won by slightly different 12-month proposals, both using Mastrofini's intercalary days.

The impact of the competition and the awards was world-wide. Flammarion had made an excellent beginning toward creating a universal interest,

but his own preoccupations in the astronomical field prevented him from the necessary follow-through.

The real impetus for an improved calendar did not come from either priests or astronomers, but from the world's leading business organization, the International Chamber of Commerce. This influential institution had been interested in the subject from its inception. In 1910, 1912 and 1914 (at its biennial conventions) it urged calendar reform in three successive resolutions, each one stronger than its predecessor. In 1912 it sent an inquiry to Rome, asking for a clarification of the Vatican's attitude, and received the following reply from the Papal Secretary of State: "The Holy See declared that it made no objection, but invited the civil powers to enter into an accord on the reform of the calendar, after which it would willingly grant its collaboration in so far as the matter affected religious feasts."

This reply was most significant, in that it clearly separated the civil calendar from the religious. The former was the responsibility of governments; the latter that of the churches.

The International Chamber's next action, in 1914, accepted the division of functions, and proceeded at once to obtain the official action necessary to enact an improved civil calendar. The Chamber (then the only existing top-level international agency) asked the Swiss Government to call a world conference for the purpose of adopting and legislating a reform which already had received unanimous approval in the unofficial channels of the business and scientific world. Switzerland accepted the invitation, and was preparing the material for the conference when World War I intervened.

After the close of the war, in 1919, the International Astronomical Union revived the subject. It formed a committee under the distinguished chairmanship of Cardinal Mercier of Belgium. His leadership made the creation of this committee an event of world-wide importance. The Cardinal had just emerged from World War I as a triumphant symbol of resistance to tyranny. He was highly regarded as both scholar and leader in England and in America, as well as in continental Europe. His advocacy of calendar reform drew many Catholics into the movement, and also commanded the attention of the Church of England.

The Cardinal's committee spent three years on its scientific studies, which culminated in a conference held in Paris in 1922. However the Cardinal subsequently resigned his presidential position because he felt himself not sufficiently equipped to deal with astronomical matters. A later meeting was held the same year in Rome, at which Professor Bigourdan of Belgium presided, with Abbé Chauve-Bertrand of the French Astronomical Society as secretary. The Abbé's interest in calendar reform continued to grow until he became one of the great Catholic leaders in this cause, highly influential by reason of his authoritative book *La Question de Pâques et du Calendrier*.

At the Rome meeting, the Astronomical Union's "Commission 32" approved the perpetual 12-month equal-quarter plan containing the one or two extra days and urged international adoption.

Science, government and business joined hands in the next stage of progress. The League of Nations was established in 1920, and was approached on the matter of an improved calendar in 1923. The Swiss Government, the International Chamber of Commerce and the International Astronomical Union all felt that calendar reform should have a place on the permanent agenda of the new international organization. Their suggestion was approved at Geneva, and the subject was allocated to the League's Section on Communications and Transit.

Now for the first time calendar reform was on an official basis in an international forum of governments. As an initial step, the League secretariat felt that it should clarify the division of authority between church and state—this seemed necessary because of pressure from several countries for stabilization of Easter, which obviously was an ecclesiastical matter. So a preliminary committee was appointed which included three ecclesiastical newcomers—the Reverend T. E. R. Phillips, secretary of the Royal Astronomical Society of London, representing the Archbishop of Canterbury; Professor Demetrius Eginitis of the Observatory of Athens, representing the Patriarch of the Eastern Orthodox Church, and Father Gianfrancheschi, president of the Vatican's Academy of Science, representing the Holy See.

The League of Nations, having confirmed through this group that the churches had no dogmatic objection to a reform of the civil calendar, proceeded to set up a "Special Committee of Enquiry" under the chairmanship of Professor W. J. M. Van Eysinga of the University of Leyden, Holland. Other members included the three ecclesiastical representatives, together with Professor M. G. Bigourdan, chairman of the International Astronomical Union's Committee on Calendar Reform, and Willis H. Booth of New York City, president of the International Chamber of Commerce. The committee was an excellent one, especially as the three ecclesiastical members were all scientists of high competence. Professor Van Eysinga was an enthusiastic advocate of calendar revision, with a thorough understanding of the international situation and the need of unification in order to facilitate communications and mutual understanding.

The special committee continued its studies throughout 1924, 1925 and 1926, when it submitted its final report. There was complete agreement on the need for an improved calendar, but the committee members had been unable to reach a decision as to the legal steps by which this was to be brought about. They felt the need for a more urgent "mandate" from governments, and they suggested that "public opinion was not yet prepared to press for action." Accordingly, their chief practical recommendation was

that all nations should be asked to set up committees to promote localized research. The ecclesiastical members of the committee added a formal statement reassuring the civil powers that "from the viewpoint of religious dogma the idea of calendar reform does not meet with difficulties of such a nature that they can be regarded as insuperable."

The vague statement that "public opinion was not prepared to press for action" seemed to call for explanation. Informally one of the committee members said: "We are convinced that this project needs a broader base of active support. We hope it can be obtained through the creation of national committees everywhere. This does not mean that we expect calendar reform to be forced upon the League of Nations by an aroused public demand. That would be asking too much. In the past, reforms of this character have always been imposed from above. If they had to wait for public opinion to insist, they would never be realized. This is historically supported by the records of the Julian, Constantinian and Gregorian reforms. Nevertheless, a certain preparation of the popular mind for calendar reform seems to us advisable and necessary."

The suggested national committees were eventually created by many governments, but in some instances their membership was composed mainly of minor officials. Generally they failed to carry out important educational activities, and were not very influential at home or in Geneva. Nevertheless they served to accent the need for calendar revision.

In the United States an intensive campaign for calendar reform was conducted by George Eastman, the famous Kodak manufacturer. He had met with Moses Cotsworth of England, an ardent advocate of a 13-month plan who was successful in winning Mr. Eastman's support. A non-official committee, known as the International Fixed Calendar League, was formed in 1924 with headquarters in the United States, of which Mr. Eastman was the chairman. Mr. Cotsworth, director of the London office, was in charge of affairs in Europe. Although an able campaign was waged it never gained the full interest and support of the people. It won mild approval among statisticians and the business world because of its *seeming simplicity*, but the public at large did not respond to a plan that was arranged on so awkward a number as 13 and which involved many unnecessary and drastic changes.

However, real interest in an improved calendar had been aroused in the United States, with the result that in 1928 and 1929 the House of Representatives introduced joint resolutions requesting the President to propose the calling of an international conference on calendar reform, or to accept, on behalf of the United States, an invitation to participate in such a conference. All this led up to the League of Nations calling the first international calendar conference ever recorded in history. It was held in Geneva October 12, 1931, and lasted a week. It was the League of Nations Fourth General

Conference on Communications and Transit that dealt with calendar reform.

A year before the international conference a new calendar organization had been formed in the United States, The World Calendar Association, that advocated a revised 12-month calendar of equal quarters, with the perpetual feature originated by Abbé Marco Mastrofini. It conducted an intensive campaign, the purpose being to inform the people of the superior advantages of the 12-month revision.

In June 1931, a Preparatory Committee meeting was held in Geneva at which both the 13-month and the 12-month calendars were given a hearing, and both received a place on the agenda of the International Conference in October. The Preparatory Committee considered 187 plans and among those eliminated by the League were:

First, four long 35-day months and eight short 28-day months, "because the very perceptible inequality of the months would be extremely inconvenient from every point of view";

Second, a "Leap-Week Calendar" with an extra leap week every five, six, or eleven years would give three different lengths of years: 364, 371 and 378 days in order to keep the calendar in step with the seasons, rejected on the ground that it is "inferior to the existing calendar and cannot be considered at all";

Third, a decimal system;

Fourth, a five, six or ten-day week;

Fifth, plans for changing the date of the New Year to January 0 or Monday or a seasonal point.

Eliminating these plans expedited the discussion for the October conference, for which three were chosen: the Phillips plan that regularized the months but was without the perpetual feature, the 13-month plan and The World Calendar. The first was rejected because it was an insufficient reform, while there was an equal number of votes for the other two. The 13-month plan received the support of Canada and Yugoslavia; and Switzerland and Greece approved the 12-month calendar of equal quarters. Both contained the perpetual feature.

The conference considered the time "not ripe" and, religious opposition having been expressed by Orthodox Jewry and the Seventh-Day Adventists, the League resubmitted calendar reform to its member governments . . . with the request that it be given further study and stressing the need for obtaining greater enlightenment of public opinion on the advantages and disadvantages of the reform.

In summarizing the result, the president of the conference, Mr. Vasconcellos of Portugal, reported that as far as reform was desired the *preference* was for a *perpetual calendar* rather than for a mere regularization of the quarters (the Phillips plan).

Great interest was aroused in South America, where Dr. Ismael Gajardo Reyes of Chile organized, in 1934, the Latin-American Committee for The World Calendar. Through this committee, which represented the majority of the South American countries, he directed the activities of the national calendar reform organizations, and succeeded in winning the interest of a number of highly influential people—statesmen, priests and scholars. No bloc of national committees has been more powerful in the development of an international consciousness of the practical possibilities of calendar reform. It was as a result of this group's educational campaign that Señor Don Agustín Edwards, representative of Chile on the League Council and his country's Ambassador to Great Britain, in January 1937 submitted a Draft Convention to the League "requesting the adoption of the perpetual calendar of twelve months and equal quarters, known as The World Calendar," and declaring that this proposal "would be extremely convenient for commercial and business life and would enhance the welfare of the working classes, and would be very advantageous for all nations." The document further stated "the present Convention shall be ratified and the ratifications thereof shall be deposited with the Secretariat of the League of Nations not later than December 1, 1938." Here was a notable step raising calendar reform to a higher level. The calendar was marching on.

The League submitted the Chilean proposal to its member and non member nations and 45 replies were received. Of these 14 (later increased to 17) approved the Convention; 6 rejected; 8 made no observations, including the United States; 10 were unprepared, with Soviet Russia one of them; and 7 considered the time premature, among them being France and the United Kingdom. The League did not consider the result satisfactory and the threat of war caused it to postpone the matter. World War II prevented further action. Thus ended all League participation.

The World Calendar Association, a non-political educational organization, free and independent in its activities, forged steadily ahead. Many committees were formed throughout the world—South America, Europe and Asia—which laid the background that broadened it to an international association in 1947. The World Calendar Association, International, was thus prepared to work on a world basis with the newly established United Nations organization.

Peru, following the example of Chile, in 1947 submitted a resolution to the Fourth Session of the Economic and Social Council of the United Nations stating: "Whereas it is widely recognized that the present calendar is unsatisfactory for the economic, social, educational, scientific and other activities of man; that there exists a general desire to bring about its revision, and that the new calendar should have twelve months and equal quarters, be perpetually the same with a stable pattern of quarter-years, months,

weeks, days and fixed holidays. . . . That the Economic and Social Council appoint an ad-hoc Committee to study and pass judgment on the adoption of a new calendar on January 1, 1950."

Upon the recommendation of the president of the Council a *Note* was prepared by the Secretary-General of the United Nations and distributed to the member governments. This *Note* is an important memorandum—a basic document for the approach of international action in the matter of calendar reform. It contains a most significant statement: "of all the drafts studied on the international plane, the draft [The World Calendar] submitted by Peru is the one which has received most favourable comments."

Hopes were high that at the Fifth Session of ECOSOC affirmative action would be taken on this much-needed reform. However, this did not happen. The proposal was dropped at the eleventh hour from the agenda. Other items appeared more important to the United Nations and were given priority. Postponement resulted.

Another opportunity was presented to The World Calendar Association two years later, in 1949. Undaunted and convinced of the rightness of the cause, Panama, the little strategic country through which the Panama Canal links North and Central America with South America, proposed the subject to the Fourth Regular Session of the United Nations General Assembly. Its representative, Dr. Ricardo J. Alfaro, presented a letter to the Secretary-General requesting that the subject be placed on the agenda of the Fourth Session. In the accompanying memorandum it was not only stated that "this perpetual calendar offers harmony and order to all strata of society" and that "millions of dollars annually would be saved," but that "the 365th day of the year in 'The World Calendar' is an international holiday, dedicated simultaneously in every country of the world to the universal harmony and unity of mankind, thus knitting all races, creeds, peoples and nations into a closer bond of fellowship, creating world-wide citizenship in the 'One World.' The potentialities of 'Worldsday' for strengthening and promoting international peace among all nations are of great value."

It is regrettable to record that the high plane on which calendar reform had now been placed was not recognized by the United Nations delegations in charge of the program committee. Again there was put forward the weak argument—"overcrowded agenda." (But when is an agenda not overcrowded?) The vote taken on the matter was 4 in behalf of the resolution, 4 against, 4 abstentions, with 2 absent. The vote lacked a majority, and the subject was automatically dropped from the agenda.

Meanwhile the Newspaper Advertising Executives Association had become interested and was instrumental in having The World Calendar introduced in joint bills in both houses of the United States 79th Congress, second session, 1946.

United Nations' failure to act in the matter, however, and the Orthodox Jewry and Seventh-Day Adventists injecting once again their own particular sectarian views in a civil calendar, clouded the issue. Subsequent bills in the 80th and 81st Congresses were permitted to "die in Committee"—they never reached the floor.

Another minor complication arose, in that a different 12-month revision had been introduced in Congress by the Hawaiian delegate, who presented the Edwards Perpetual Calendar. This plan differs from The World Calendar in that the extra day opens the year as "New Year's Day," presumably dated January 0, and Monday becomes January 1st, with all subsequent weeks beginning with a Monday. The familiar order of the weekdays is thus disarranged, Friday becomes the 5th, Saturday the 6th and Sunday the 7th day of the week. These wholly unnecessary changes, and beginning every week with a materialistic note, make the Edwards plan fall far short of the superior World Calendar. It also "died in Committee."

Because of the negative stand taken by the United Nations, Congress did not take action. In the words of Senator Estes Kefauver, who introduced the bill in the first session of the 81st Congress (1949): "Should the United Nations General Assembly take favorable action, I am confident that the United States Senate Foreign Relations Committee will report my bill out favorably, so that action can be taken on it in the Senate."

The World Calendar is invincible; another sponsor was forthcoming.

In 1953, India took the initiative by requesting the Secretary-General to place World Calendar Reform on the 18th Session of the Economic and Social Council of the United Nations at Geneva, July 1954. Here again is a clearcut proposal under the aegis of the United Nations for definite action to be taken toward finalizing the adoption of The World Calendar. It is imperative that this subject be given just and fair consideration at this important July conference. Hence it is reasonable to anticipate that the subject having been by-passed twice, this international body will wish to give it *this time* the earnest attention it so deservedly merits and, by so doing, the United Nations will advance its progress and calendar reform will be added to its other social and civil accomplishments.

India in its transmittal letter states: "The purpose of the plan is to adopt for the whole world . . . a new, fixed, uniform and invariable calendar, regulated astronomically according to the movement of the Earth around the Sun, and more regular, scientific and advantageous than the Gregorian Calendar." It proposes The World Calendar as "of great importance to the nations of the world."

Definite action taken by ECOSOC in July will enable its findings to be presented to the General Assembly of the United Nations either in 1954 or 1955. The United Nations will then be in a position to submit The World

Calendar to the respective governments for legislative action. Thus the nations will know the recommendation reached by the United Nations Assembly on The World Calendar and preparations and plans can be made and legislative action taken among the various governments toward making the change effective. The new calendar can be put into operation on Sunday, January 1, 1956, or the next available date, January 1, 1961, when both the old and the new calendars agree, making the transition easy. The World Calendar belongs to a progressive civilization.

◆◆◆ Chapter XI

THIRTEEN'S RISE AND FALL

Thou art weighed in the balances, and art found wanting.

—Daniel 5:27

THE FIRST known proposal for a 13-month fixed calendar came from a colonial American in 1745 and was published in the *Gentleman's Magazine* of London under the guise of "Hirossa Ap-Iccum." Later in *Scott's Magazine* a "Mr. Urban" of Maryland also wrote an essay on a 13-month perpetual calendar.

Toward the middle of the nineteenth century, a French mathematician and philosopher, Auguste Comte, proposed another 13-month calendar that he belabored with innumerable names of great men in history. Such cumbersome naming of days, weeks, months, invited its failure from the outset.

It was not until many years later, in the early years of the twentieth century, that it was revived by Moses B. Cotsworth, who actively advocated and zealously worked for his proposal for the 13-month calendar.

Cotsworth, the modern "father of the 13-month calendar," was responsible for this type of calendar reform. Born in York, England, he was brought up by his grandparents who used the old shadow-pin, noon-mark and hour-glass methods, knowledge of which facilitated his later researches. His business training began with the North Eastern Railway Company, where he showed special aptitude for making calculations and investigations which brought him the commission to make extensive computations and adjustments in revising the British Railway rates, during 1891-1895. In recognition of his talents he was called upon to establish improved systems of railway statistics, which were adopted by the British Railway Companies and the Ministry of Transport.

This experience brought him into direct contact with the defects of the Gregorian calendar and the resultant difficulties with which every statistician must wrestle. He resented the many hours and the labor lost in adjusting

accounts on such a haphazard and wandering system of tabulation. Dealing strictly with figures, the 13-month calendar with its fixed months, each of 28 days and four weeks, appealed to him as the ideal solution. In his campaign for this plan he won the active support of the American business man and philanthropist, George Eastman, founder of the Eastman Kodak Company, who financed the campaign during his life.

Mr. Cotsworth's plan was simple. All the months of the calendar were given 28 days each, divided into four weeks, beginning with Sunday and ending with Saturday, with the 13th month inserted between June and July, called "Sol." With this established, the 364-day year was given an extra day with the suggested name "Year Day" in common years that would account for the 365th day, and "Leap Day" in leap years that was added in the midyear, which would be the 366th day. These days, besides having their own names, also had their special dates, December 29th in common years and June 29th in leap years. He proposed that these extra days be observed as holidays.

The advantages of the plan were as follows: Each month had the same number of working days and the same number of weeks; each month was comparable with all the other months; each week would be one-quarter of the month; dates for public meetings, law court sessions and other pending events would always be fixed; the end of each month would coincide with the end of the week. It was a plan especially designed for statisticians.

However, this plan had grievous drawbacks: The seasons were ignored; quarter-years could no longer approximate seasons by months, as each quarter would have 3 months plus one week or $3\frac{1}{4}$ months; as fractions are always complicated, the ultimate result would be the blotting out of months and the calendar be reduced to mathematical groupings of days and weeks by numbers; there would be thirteen monthly closings in the payment of bills, which would increase bookkeeping with attending expense; thirteen monthly rentals and thirteen monthly bills would add to the cost of living; the conversion of dates (as only the first 28 days would agree with 28 days of the Gregorian calendar) would bring innumerable difficulties; the remaining 337 days would all undergo change, nullifying past records and hampering research.

The 13-month plan would standardize the month to the point of rigid monotony and the calendar would lose its pleasing variety. Nature expresses infinite order with variety and does not conform to rigid patterns, as seen in her four different seasons, winds, and points of direction.

Mr. Cotsworth in his plan succeeded in bringing the calendar to the ultimate point of simplicity. However, the French astronomer Camille Flammarion had said, "such simplicity that falls into monotony is not adaptable to human life."

When the League of Nations submitted a plan in 1937 to its member

and non-member states, the selection was the Draft Convention of the Chilean government, which requested adoption of the perpetual 12-month year of equal quarters. The 13-month plan was thereby definitely eliminated.

Much credit, however, must be given the 13-month advocates who pioneered so valiantly to reform the calendar on a stable and fixed basis and to eliminate the annoying inconsistencies and inconveniences which beset the Gregorian calendar. They rendered the world a most valuable service *in preparing the way* for a better and more equalized system in which the changes are not so drastic, a variety with order is maintained, days and dates agree, all the different time units receive equal recognition, and balance and harmony in the calendar are obtained.

Thirteen-Month Calendar						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

Leap Day, June 29 Year Day, December 29

◆◆◆ Chapter XII

RUSSIA'S DIFFICULTIES

It is obvious that the eloquent demand of our century and of modern life will not stop before any difficulties, and therefore undoubtedly a practical solution of the calendar question is near.

—Leo Tolstoy

RUSSIAN calendar history is no exception to that of other calendars of the past; it has been a varied one with many trials and errors. Eventually the Gregorian calendar was adopted by the government to conform with the greater number of other nations.

Dr. Vera Rossovskaja, astronomer of the Research Institute at Leningrad, wrote a notable book, *The Remote Past of the Calendar*, published in 1936, in which she stated that up to the end of the fifteenth century the Russian year began on March 1st. Years were counted from the "creation of the world," an event that was placed in the year 5509 B.C. Then for a brief interval the Moscow government began the calendar year with September 1st, until about 1700 A.D., when Peter the Great introduced January 1st as the beginning of the year, adopting at the same time the reckoning of the Christian era. This aroused the opposition of the Eastern Church.

It was in 1709 that the calendar (the Julian calendar) was first printed in Russia, more than 127 years after the Gregorian calendar had been introduced in Europe.

In the nineteenth century, because of the almost world-wide acceptance of the Gregorian calendar, the Department of Foreign Affairs used the Gregorian style in its relations with foreign countries; the commercial and naval fleets too were obliged to reckon time according to the Western calendar; and finally sciences which had a world character, such as astronomy, meteorology, etc., were compelled to follow the new system. All this caused considerable complication.

In 1829 the Department of Public Instruction recommended a revision of the calendar to the Academy of Science. The Academy proceeded to petition the government to accept the Gregorian calendar. Prince Lieven, in submitting the plan to Tsar Nicholas I, denounced it as "premature, unnecessary, and likely to produce upheavals, and bewilderment of mind and conscience among the people." He further declared that "the advantage from a reform of this kind will be very small and immaterial, while the inconveniences and difficulties will be unavoidable and great." The Tsar, being apprehensive, wrote on the report: "The comments of Prince Lieven are accurate and just."

From thence onward frequent attempts were made to remove the ban, but to no avail. In 1918, after the Revolution, Lenin raised the question of calendar reform and, after an investigation of the subject, published a decree directing the adoption of the Gregorian style "for the purpose of being in harmony with all the civilized countries of the world."

The adoption of the Gregorian calendar necessitated a cancellation of 13 days, instead of ten days, because in the interval three centurial years had been counted as leap years. Although the government officially accepted the Gregorian calendar, the Russian Eastern Orthodox Church still clung to the earlier and more familiar Julian. This is the reason, for example, that the observance of Christmas, on December 25th in the Gregorian calendar, comes in the Julian calendar on January 7th.

In 1923, a radical change in the calendar took place. Soviet Russia abolished both the Julian calendar, used by the Russian Orthodox Church, and the official Gregorian calendar that had been installed by Lenin. A new calendar was introduced, in which the weeks were changed and all religious feasts and holy days were replaced by five national public holidays associated with the Revolution.

The "Eternal Calendar" went into effect on October 6th (Revolution Day), giving five days to the weeks and six weeks to the months, so that there were 12 months of 30 days, plus five holidays with national names instead of weekday names. The chief objective of the "Eternal Calendar" was to in-

crease production, and special color cards indicating the day of rest were distributed to the workers. Rest-days became staggered. It was not realized at the time that such an arrangement would cause real hardship to family life. After several years of trial, in 1931, the five-day week and staggered rest-days were replaced by another system.

This new plan provided for a 12-month year with the same holidays as before and the same extra day for leap years, but a new week of six days was introduced wherein the rest-day came regularly on the 6th, 12th, 18th, 24th and 30th of the month, in addition to the five national holidays.

Through all these changes decreed by the Russian government, the Church still clung to the Julian calendar, and farmers and peasants continued to work and plan according to the seasons, months and weeks, as had their forefathers.

To historians and statisticians these various calendar changes bring real difficulties. Reference to the Russian Julian calendar must be made previous to 1918, from 1918 to 1923 the Gregorian calendar was in use, from 1923 to 1931 the five-day Russian Revolutionary calendar must be consulted, and from 1931 until 1940 the Russian calendar with the six-day week was in effect. From 1940 onward, official Russia returned to the Gregorian calendar with its seven-day week, using Sunday as a rest-day. By this latest action the government returned to the idea of Lenin, and Russia is once more using the same calendar as "all the civilized countries of the world."

Leo Grulio, editor of *The Current Digest of the Soviet Press*, recently wrote: "A combination of factors appears to have swung Russia into the growing list of supporters of calendar reform. Whether the Soviet will go beyond its present cautious endorsement of study of The World Calendar Association's proposal remains to be seen. That the development of the Russian studies will lead to beneficial results is definitely assured."

◆◆◆ Chapter XIII

INDIA'S CONFUSIONS

Men look to the East for the dawning things,
for the light of the rising sun,

—Douglas Mallock

CALENDAR reform took a real step forward when India declared itself in favor of it. Initiated in Europe, developed and advanced in the Americas, it has now through India's definite action expanded to include Asia. Thus three vast areas—Europe, the Americas and Asia—are all contributing to give the world a better idea of unity and cooperation by estab-

lishing a new world chronology—one and the same time-chart—The World Calendar.

Rudyard Kipling, born in India and familiar with her peoples and customs, wrote "East is East and West is West, and never the twain shall meet," *until* "there is neither East nor West, Border nor Breed nor Birth, when two strong men stand face to face, though they come from the ends of the earth!"

The imperative need for better understanding and fostering friendlier relationships between the East and West was thus greatly strengthened by India in recognizing two strong forces—Time and the Calendar—uniting the Eastern and Western Hemispheres. Time, we know, is the great healer; the Calendar can become the great uniter. Historians may well acclaim India's activity in calendar reform one of the most notable events of the twentieth century.

India's interest in this subject is easily understood, because her own calendar situation is "chaotic and intolerable." There are serious disadvantages under which India is laboring:

The government must print every year an official almanac containing four different calendars, including among these the Gregorian and Moham-medan; this enormous compilation consists of 3,273 pages; astrological practices and countless religious doctrines complicate recording of days, months and years; conflict exists between scientific astronomy and "fantastic astrology"; the calendar lacks a scientific basis on which to obtain accurate calculations and data; India has no national observatory; lunar calendars increase difficulties; the 1,400-year old rule relating to the seasons and the lengths of solar months causes wrong calculations and the lengths of solar months followed by the almanac makers violate the fundamental rules of scientific astronomy.

The following solutions have been suggested by Professor M. N. Saha, chairman of the Calendar Reform Committee of India:

Establish an Indian Greenwich, where annual compilations can be made; Ephemerides, Nautical and Air Almanacs can be printed; a national civil calendar can be instituted; the calendar should be based on the perpetual solar time-reckoning for the whole of India; lunar calendars should be avoided for all civil purposes; length of the year should be 365.2422 days; present irregular months should be replaced with the length of months as proposed in The World Calendar; and days should be calculated in the accepted astronomical manner, from midnight to midnight of Indian Greenwich.

The two "strong men," or powerful forces—Time and the Calendar—are fulfilling Kipling's prophecy. There will be no longer a cleavage between "border, breed nor birth," on the subject of Time when The World

Calendar has become the universal measure of Time on our Earth.

India's action before the United Nations and her official calendar committee, both undertaken with the sanction of Prime Minister Nehru, are lifting calendar reform to a high international position that deserves full recognition from the delegations of ECOSOC, particularly, as the subject is non-political, non-partisan, non-nationalistic and non-sectarian.

It has been said that the adoption of the solar calendar by the Egyptians marked a great cultural achievement. It can rightly be said that modern calendar reform—The World Calendar—sparked by India's active participation, will mark a significant step in establishing greater world unity and cooperation.

◆◆◆ Chapter XIV

WORLD CALENDAR REFORM

The times are big with tidings.

—Robert Southey

IT IS increasingly apparent when dealing with so universal a subject as the calendar that personal, political, national and religious bias have no part. Calendar revision affects all the peoples of the world, whether of the Far and Near East, West, North or South. Like the sun which shines upon the inhabitants of Earth, so the calendar influences all mankind. The point of view must be global and must consider the common good of all, not for the few or for any particular major or minor group. The revision must be approached with the perspective that the subject requires. By adhering to this simple principle, confusion and difficulties will be avoided.

My interest in calendar reform began in the summer of 1929 while staying at the Lake Placid Club, where I heard Dr. Melvil Dewey, founder and president, give a lecture "How To Simplify Life." He closed his talk with a strong plea to improve the calendar which, in its many irregularities, was far from satisfactory. He then advocated a 13-month calendar that disturbed me. How could a non-divisible number like 13 simplify?

A fortnight later, on Sunday September 8th, the *New York Times* published a letter by the engineer Lewis E. Ashbaugh of Denver, Colorado, in which he opposed the perpetual 13-month plan and advocated the more easily divisible perpetual 12-month calendar favored in Europe. He wrote: "While we are planning an improved calendar, let us also insist on the very best, with all conditions considered, and let us adopt the revised twelve

month year of equal quarters and equal working-day months, easily adapted from the calendar we now use." It instantly attracted my attention and as I was reading, I heard a clear voice saying: "*You must work for this plan.*" It was so real, I had to accede. I could not do otherwise for here was a call that had to be followed. It has ever been a shining light urging me on, convincing me that this plan comes from a higher power than that of man.

The proposed new plan—The World Calendar—is solar. It is based on a purely scientific and mathematical principle and its purpose is to meet the civil, social, economic, scientific, cultural and international requirements of the day. Religious feast days and national holidays have their regular places, but these are separate and distinct and do not affect its ordered arrangement.

The revised 12-month calendar accepts the perpetual feature of the Roman Catholic priest Marco Mastrofini who considered the year as of 364 days, wherein the 52 weeks (each of seven days) fit within the year.

The 365th day or the $1/7$ of a week is placed at the end of December: an "extra" day between two weeks, that does not interfere with the week itself. This annual extra day has its name *Worldsday* and its specific date December W or December 31st. By this method every outgoing year is securely sealed with the new *Worldsday*, a new world holiday, and becomes a finished time period.

The annual "year-book," fully completed in its cycle and observed with proper celebration on the year-end *Worldsday*, is then placed on the archive shelves of Time, where it can be taken down for reference whenever desired. By this method every year is a complete unit of Time, no longer tied to a day of the first week of an incoming year. A new year-book is now ready to be opened on New Year's Day Sunday, January 1st.

The 366th day in leap years is likewise placed between two weeks in the mid-year after Saturday, June 30th, and before Sunday, July 1st. Its name is *Leapyear Day* and date June W or June 31st. In this manner the new *Worldsday* (365th day) every year and the new *Leapyear Day* (366th day) every four years keep the calendar equalized, balanced and perpetual. These new stabilizing days are unique in the calendar in being universally observed as *world holidays*.

The method of the extra day can be compared to an interesting Chinese fable.

A farmer, at his death, left 11 sheep to his three sons, with instructions that the eldest should have one-half the number of sheep, the second son one-quarter and the third son two-thirds of the remainder. This strange division greatly perplexed the family until a wise mathematician showed them a way of solving their problem. He told them to go to a neighbor and borrow a sheep. With this borrowed sheep, the sons now had 12 animals which they

could distribute in accordance with the wish of their venerable father. The eldest son received one-half the number, or six sheep; the second son received one-quarter, or three sheep; the youngest received two-thirds of the remainder, or two sheep. When the borrowed animal had thus served its purpose, the sons returned it to its owner.

In reverse, calendar reformers have solved their problem by *withholding* the 365th day, whereby the year has 364 days, a number easily divisible into equal quarter-years of 91 days each and equal half-years of 182 days each. With this satisfactory solution, the 365th day is returned to the calendar and placed at the end of the fourth or last quarter of the year as the new Worldsday.

The perpetual World Calendar retains the twelve months and divides these into equal quarter and half-years. Each quarter-year is given 3 months with the lengths more evenly apportioned. The first month has 31 days and begins with a Sunday, the following two months have 30 days each and begin respectively with a Wednesday and a Friday. Every month has 26 weekdays plus Sundays. Each quarter-year begins with Sunday and ends with Saturday, has 91 days, 13 weeks or 3 months approximating a season. Corresponding days and dates always agree and perfect co-ordination is had among the different time units, resulting in accurate comparability from year to year. Every year begins with Sunday, January 1st, and ends with the non-working new world holiday—Worldsday. Holidays can be stabilized according to the customs of the various nations. Likewise, religious feast and fast days are anchored to their regular days and dates and celebrated in keeping with the various religious faiths.

It is noteworthy that the *first* day of every year, every week and every quarter-year begins on a Sunday and that the *seventh* day of every year, every week and every quarter-year ends on a Saturday. For the first time in calendar history, the week will actually have its regular place in the calendar and will no longer impose the objectionable shifting of weekdays and dates as heretofore.

Only six months, between the 28th of February and the 1st of September, are changed by one or two days. From the 1st of September through the 28th of February, the calendar remains the same as the Gregorian.

The dates which call for change are three—March 31st, May 31st and August 31st—replaced by three new ones—February 29th and 30th and April 31st. This will call for a minor adjustment of days which were observed on the vanishing dates. Birthdays will now be observed on the day before, on the 30th of the month, the method used by leap-year children ever since 1236 A.D.—718 years ago when King Henry III of England decreed that the leap day should be “reckoned in the same month wherein it groweth and that day, and the day next going before, shall be accounted for

one day." For the first time in calendar history the *day* of birth will be honored with the *date*.

The World Calendar is a mathematical masterpiece. It deals as successfully with the arbitrary numbers 7 and 13 as with the easy numbers 2, 3, 4, 6 and 12. And with the aid of the one or two stabilizing days the calendar at long last has become a steady and reliable time-system.

This outstanding achievement cannot be credited to any one particular nation or person. It is the slow process of development in which many minds have contributed, many valuable historical facts have been explored, and increasing knowledge and understanding have been acquired. The calendar has at long last become a world measurement of Time—a universal world-chart for all humanity to use and enjoy.

What are some of the advantages?

In a large corporation, for instance, the tabulating and analyzing of the various statistical reports, essential in the evaluation of the business, are easily had because of the perfect co-ordination of the different time units. One department deals with the day, another with weekly or bi-monthly payments, then there are the monthly salaries and the seasonal and quarterly reports to be considered, all of which synchronize in every quarter, half-year and the year itself.

In every business and industry and in all the professions, a perpetual ordered calendar will facilitate methods of calculating Time as well as simplify bookkeeping.

It will do away with the guesswork of finding out on what date the first Tuesday after the first Monday in November will fall because it will always be November 7th.

Opening and closing schools and arranging vacation periods will be made easy because every year will have the same corresponding days and dates.

Holidays will be fixed in this new standardized calendar. This will benefit the employer in production and management since wandering holiday days will no longer interfere with their activities; nor will the worker and employer lose out by closing plants and other places of business because of marooned working days.

A fixed Labor Day in America on its regular day and date, Monday, September 4th, is of great advantage to educational institutions and will eliminate costly expenses of preparing and printing new catalogues every year.

Interest payments, insurance premiums and rentals will be based on regular schedules, an advantage to both sides of the transaction. These and many other advantages, far too numerous to mention, will bring to the peoples many benefits with no favors given or discrimination shown against any one particular group.

Above all, the perpetual World Calendar is a true time-conserver and time-preserver. We are thus protecting our most valuable commodity—Time. It was Benjamin Franklin who admonished Americans “Do not squander time, for that’s the stuff life is made of.”

To achieve these desirable objectives certain outmoded customs and traditions should be abandoned. There must be a willingness to cease thinking of today in terms of yesterday and make the today stand for a better tomorrow. Sectarian, self-centered, narrow thinking must give way to wider universal fields of thinking. Horizons must expand beyond the confines of group interest, national bias, personal prejudice and religious bigotry.

In these days unity is particularly vital and it is incumbent upon nations to encourage systems wherein an interrelationship of greater understanding, harmony and good will is inculcated. The World Calendar is an outstanding example of this ideal. Certainly it bears tidings of great moment—One World Calendar for One World.

The World Calendar

January	31 days	July	31 days
February	30 days	August	30 days
March	30 days	September	30 days
April	31 days	October	31 days
May	30 days	November	30 days
June	30 days	December	30 days
Quadrennial Leapyear Day June W or 31		Annual Worldsdays December W or 31	

◆◆◆ Chapter XV

WORLD HOLIDAYS

... and the leaves of the tree
were for the healing of the nations.
—Revelation 22: 2

EVERY calendar change in the past carried a new and unusual feature that highlighted the reform. The Egyptians introduced the solar year of twelve months with 30 days to each month, closing it with five additional days so as to conform to the seasonal year. The Julian reform accepted the leap-year day. The Constantinian contribution was the week of seven days and the first day Sunday as the official day for Christian worship. The Gregorian harnessed the calendar to the seasons from which it had strayed, by cancelling ten days from the calendar and amending the leap-year rule. The new feature of The World Calendar is the “Worldsdays” that takes

the fractional $1/7$ day of the week (none other than the 365th day of the year) and places it at the end of every year as an extra day. This new world holiday highlights the calendar by which method every year is stabilized, comparable to other years.

Similarly the necessary 366th day the "Leapyear Day," another world holiday, is placed between the last week of the second quarter and the first week of the third quarter in leap years and the calendar keeps its balance. They have each their respective dates, December W and June W or, if preferred, December 31st and June 31st.

It is of interest to note that this proposed new calendar follows a Biblical plan, the symbolic holy city of Jerusalem, that is based on a foursquare pattern. It has three months or "gates" to every quarter-year, twelve months to every year. The leaves of the tree of life within the city are for the "healing of the nations" which, in The World Calendar are the world holidays that in their international observance will foster greater unity among the nations.

It is lamentable to note that opposition has been expressed to these unique and beneficial world holidays on the ground that they will create two eight-day weeks—one at the end of every year and another in the middle of the calendar in leap years. These days, according to Orthodox Jewry and Seventh-Day Adventists, will cause wandering Sabbaths. They do not realize, however, that in the present Gregorian calendar the week constantly wanders throughout the year. Every new year is forced to begin on a different weekday so that the first date January 1st may fall on any one of the seven days. It is this grievous fault of wandering weeks which The World Calendar is correcting. With the new World day in effect, every year will actually begin on the first day of the week, Sunday, and on the first day of the first month, January, and likewise the Sabbath will always be the seventh day of every new year. The calendar has become a stable instrument of Time for mankind's daily use, enhanced by the new world holidays—forming a rainbow bridge of varying colors whereon peoples of all climes, customs and faiths meet in a spirit of increasing understanding and fellowship.

In addition, travelers who cross the International Date Line unfailingly experience either an eight or a six-day week, depending on the direction taken. When Asia-bound the week is short and has but six days, when America-bound the week is extended to eight days. Here are instances when the "unbroken continuity" of the week is continuously being broken.

World day and Leapyear Day in their international observance will bring peoples and nations closer together and awaken in them a keen awareness of man's interdependence and interrelationship.

In this all too brief history of the calendar and its effect on civilization, an outstanding lesson is clear. It must be freed from shackles of sectarian belief, superstition, tradition and narrow, restricting prejudice. Only as the

calendar is built on scientific astronomical and mathematical grounds can it freely serve humanity and the entire world.

On the matter of religious holidays and feast days, these indubitably rest with the religious leaders.

An outstanding calendar authority, Professor Martin P. Nilsson, in his scholarly book *Primitive Time-Reckoning*, writes in his concluding sentence that time-reckoning must be emancipated "from the fetters of religious cult."

In this belief *Calendar Marches On* closes its pages, convinced that as the calendar returns to its scientific basis—seasons and days and years—so will it keep true to the original concept of Time as designed by the Creator, Lord of the Universe.

WHEREAS after study and due deliberation on the merits of The World Calendar as against the calendar at present in use, this Congress should recognize that the calendar is the Nation's and indeed the world's standard of time, the measure of every act, and the timetable of our very lives. Being fixed, more orderly and better balanced and equalized than the present calendar, adoption of the revision offered by The World Calendar will not only adjust the calendar to the requirements of our modern world but may well be reflected in greater social and individual stability, better organization of life, and more harmonious relationships.

—The Honorable Elbert Duncan Thomas, United States Senate, from Senate Bill S. 1755, July 16, 1947.

MR. SPEAKER, many of the subjects which come before the Congress have immediate and long-range objectives of importance. None is concerned with a more enduring subject than time and the calendar.

It would be an impropriety and misfortune were anything so basic and universal to be permitted to acquire a partisan complexion. Time, and the calendar as a standard of time, are the property of all and belong to every person. No party, no race, no religion, and no organization can claim a vested right or ask preferential treatment at the expense of the majority. In our democratic nation the greater good for the greater number must prevail.

—The Honorable Karl E. Mundt, member of the Foreign Affairs Committee of the House of Representatives of the United States Congress, from the *Congressional Record*, July 15, 1946.

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A TRIBUTE

There is no death!
What seems so is transition.
—Henry W. Longfellow

While this issue of the Journal was being prepared The World Calendar Association sustained a severe loss in the death of Charles Dexter Morris, its much beloved Editor and Public Relations Counsel. The autumn number will carry a more complete tribute to his unusual ability and loyal service.

The World Calendar Association, Inc., will gratefully receive contributions for furthering its work. Such contributions are tax exempt under Federal and New York State Income Tax laws.



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THE WORLD CALENDAR GOES TO WORLD'S GOVERNMENTS
A JEWISH VIEW ON CALENDAR REVISION—AN OPEN LETTER
THE CATHOLIC ATTITUDE TOWARD CALENDAR REVISION
A PROTESTANT VIEW—CLARIFYING CALENDAR REFORM

September 1954

THE WORLD CALENDAR

1ST
QUARTER

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

2ND
QUARTER

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

3RD
QUARTER

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

4TH
QUARTER

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

W (Worldsday, a World Holiday) equals 31 December (365th day) and follows 30 December every year.

W (Leapyear Day, another World Holiday) equals 31 June and follows 30 June in leap years.

In this Improved Calendar:

- Every year is the same.
- The quarters are equal: each quarter has exactly 91 days, 13 weeks or 3 months; the four quarters are identical in form.
- Each month has 26 weekdays, plus Sundays.
- Each year begins on Sunday, 1 January; each working year begins on Monday, 2 January.
- Each quarter begins on Sunday, ends on Saturday.
- The calendar is stabilized and made perpetual by ending the year with a 365th day following 30 December each year. This additional day is dated "W," which equals 31 December, and called Worldsday, a year-end world holiday. Leap-year Day is similarly added at the end of the second quarter. It is likewise dated "W," which equals 31 June, and called Leapyear Day, another world holiday in leap years.

Journal of

CALENDAR REFORM

September 1954

VOLUME XXIV

NUMBER 3

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Clarence R. Decker, Editor

Linda Halsted, Associate Editor

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CHARLES DEXTER MORRIS
22 January 1883—20 May 1954

In Memoriam

IT is most difficult for his associates in The World Calendar Association to express the sorrow and sense of loss occasioned by the death of Charles Dexter Morris, editor of the *Journal of Calendar Reform* and Public Relations Counsel.

It was on his insistence that this *Journal* was founded and it was his initiative, his guidance and his steadfast belief in its importance that brought it distinction.

Born in Eldred, Pennsylvania, and graduated from Olean High School in New York in 1901 and from Yale University in 1906, Mr. Morris began his newspaper career in New Haven and Bridgeport, Connecticut, later working for the *New York World* and the *New York Sun*. Throughout World War I Mr. Morris was a member of the London Staff of the Associated Press. In 1918 he headed the American Red Cross news and publicity service in London with the rank of Major. Mr. Morris' achievements in the Near East relief field brought him a number of decorations including one from King George of Greece in 1923.

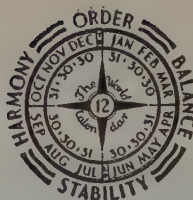
As a public relations consultant in New York, Mr. Morris became interested in The World Calendar movement and accompanied Miss Achelis to Geneva, Switzerland, to attend the League of Nations international conference on calendar reform in 1931.

Since then his advice, counsel and loyal service have been valued by all associated in advancing the cause of calendar revision. His efforts, so vital to the world aspects of the enterprise to which he devoted many years, were commensurate with his wide experience as a journalist and a citizen of the world.

Mr. Morris will be missed by his many friends. As one such expressed it in a letter: "Although I saw him in recent years only occasionally, my warm affection for him was unchanged." His prevailing modesty and his friendly nature endeared him to all. We have lost a staunch friend—an earnest worker devoted to the cause.

His death is recorded as a sad duty and with the expression of the most profound sorrow.

—The World Calendar Association



THE WORLD CALENDAR FOR ONE WORLD

VOL. XXIV

SEPTEMBER 1954

No. 3

Editorial

Calendar Marches On!

THE Calendar indeed marches on!

On 28 July the United Nations took an important stride toward the goal of attaining a scientific civil World Calendar. On that date the U.N. Economic and Social Council *unanimously* approved the Resolution introduced by India and seconded by Yugoslavia calling on all governments to present their views on calendar reform. These views are requested by early 1955 for consideration by the Council at its forthcoming session, to be held in New York next May.

It is with real satisfaction that your *Journal* reports this significant event. The many preparatory meetings and conversations for the conference made heavy demands on the able groups spearheading the cause. They are entitled to our sincere appreciation.

Opposition came from those who were unduly apprehensive for political, sectarian, or other special reasons. Some were simply indifferent, using the time-worn excuse that there are more important problems which should have precedence. There were others—the cynics—who have little faith in progress, who are content with the *status quo*. The arguments of these groups were met with skill and tact.

The proponents of revision were encouraged by the knowledge that millions of people representing a variety of cultures look forward to an improved calendar as a practical necessity for today and as a definite step towards international cooperation and amity.

The ECOSOC decision was the only consistent course the United Nations could take. It came as an inevitable outgrowth of historical events concerning calendar

reform—the years of deliberations of both the old League of Nations and the new United Nations. It was in keeping with the spirit of the Charter of the United Nations—a body established “to promote social progress and better standards of life in large freedom . . . to employ international machinery for the promotion of the economic and social advancement of all people.” It was an acknowledgment that *Time* is one of the most significant economic and social influences in life. By recognizing the calendar—*Time*’s agent—as a uniting force and by requesting its study by the governments of the world, the United Nations can now proceed toward its revision in a regular and orderly procedure.

The story of what was accomplished at Geneva is summarized in this issue of the *Journal*. The detailed report of the ECOSOC Plenary Session on World Calendar Reform is being published in Geneva. Copies of this pamphlet will be available upon request to this Association.

Although proponents of The World Calendar had hoped for more positive and progressive action, they are satisfied, fully realizing, however, that much, very much has yet to be done. Intensive work with steadfast faith in the rightness of the cause will bring forth the desired result. With favorable opinions received, the Council can then proceed to bring the matter before the General Assembly. From the General Assembly the subject can be submitted to the individual governments for final ratification and adoption. The target date for that desired goal is Sunday, the first of January, 1961, when the present calendar and The World Calendar again coincide.

The issue is now squarely before all the governments of the world. But governments need the encouragement and assurance of public opinion. From the thousands of press stories and editorials, institutional endorsements and letters from individuals and organizations which come to its office, the Association knows that The World Calendar has the support of public opinion. But public opinion to be effective must express itself to those responsible for translating it into practical action.

It now behooves all of us—as individuals, as members or officers of organizations and as responsible citizens—to make our voices heard. Now is the time for people throughout the world to write and to talk the cause over with influential men and women, friends and neighbors, and to impress upon everyone the urgency of making their own views known to those officials responsible for the position their government will take at the Council meeting next May.

BETWEEN NOW AND THE SPRING OF 1955, GOVERNMENTS MUST STAND UP AND BE COUNTED.

BETWEEN NOW AND THE SPRING OF 1955, YOU AND I—THE PEOPLE RESPONSIBLE FOR GOOD GOVERNMENT—MUST STAND UP AND BE COUNTED!

UNITED NATIONS
ECONOMIC
AND
SOCIAL COUNCIL



Distr.
LIMITED

E/RESOLUTION (XVIII)/16/Rev.1
30 July 1954

Eighteenth session
Item 15

Dual Distribution

WORLD CALENDAR REFORM

The Economic and Social Council,

Noting the proposal for a reform of the calendar by international agreement contained in document E/2514,

Feeling that to enable further consideration of the proposal it is necessary to obtain the views of governments of States Members and non-members of the United Nations, on the desirability of calendar reform,

1. Requests the Secretary-General to transmit document E/2514 and any other relevant documents to the governments of States Members and non-members of the United Nations, with the request that they study the problem and furnish their views by some time early in 1955;

2. Decides to consider the matter again at its resumed nineteenth session together with the replies received from governments.

Resolution adopted at the
819th plenary meeting
28 July 1954

REFORME DU CALENDRIER UNIVERSEL

Le Conseil économique et social,

Notant la proposition relative à une réforme du calendrier par voie d'accord international, qui est exposée dans le document E/2514,

Estimant que, pour permettre un nouvel examen de cette proposition, il est nécessaire de recueillir l'avis des gouvernements des Etats Membres ou non membres de l'Organisation des Nations Unies quant à l'opportunité d'une réforme du calendrier,

1. Demande au Secrétaire général de transmettre le document E/2514 et tous autres documents pertinents aux gouvernements des Etats Membres ou non membres de l'Organisation des Nations Unies en les priant d'étudier la question et de faire connaître leur opinion vers le début de l'année 1955;

2. Décide de reprendre l'examen de cette question à la reprise de sa dix-neuvième session lorsqu'il sera en possession des réponses des gouvernements.

Résolution adoptée à la
819e séance plénière,
le 28 juillet 1954.

REFORMA DEL CALENDARIO MUNDIAL

El Consejo Económico y Social,

Tomando nota de la propuesta de reforma del calendario por acuerdo internacional (Documento E/2514),

Estimando que para el estudio más detenido de la propuesta es necesario conocer la opinión de los gobiernos de los Estados Miembros y no miembros de las Naciones Unidas acerca de la conveniencia de reformar el calendario,

1. Pide al Secretario General que transmita a los gobiernos de los Estados Miembros y no miembros de las Naciones Unidas, el documento E/2514 y cualesquiera otros documentos pertinentes con la petición de que estudien el problema y comuniquen sus opiniones a principios de 1955;

2. Décide examinar de nuevo la cuestión, junto con las respuestas que se hayan recibido de los gobiernos, al reanudarse el 19º período de sesiones.

Resolución aprobada en la
819ª sesión plenaria,
28 de julio de 1954.

Geneva Press Release 29 July 1954

The World Calendar Association, International

THE WORLD CALENDAR GOES TO WORLD'S GOVERNMENTS

THE World Calendar Association is highly gratified at the result of a one-and-a-half hours' debate* in the Economic and Social Council Plenary Session yesterday (28 July), when the Indian Delegation, supported by the Yugoslav Delegation, introduced the resolution reprinted on page 110 of this issue of the *Journal*. The resolution was passed *unanimously*.

The Association's natural elation at this important event in calendar history is due to the fact that for many years calendar reformers have sought to bring this question before the governments for international action. This week their efforts have been crowned with a success exceeding their best hopes, for they witnessed that very rare event in United Nations circles—UNANIMITY.

The final resolution, it is true, did not go as far as some reformers have wished. On the other hand, those groups in certain countries opposed to calendar reform have been shown unmistakably that the governments of the world are not only concerned with the defects of the present calendar, but are willing to examine the problem on its merits. The World Calendar Plan, so adroitly presented by the

Government of India (which has its own calendar committee working under the chairmanship of the distinguished nuclear physicist, Professor M. N. Saha, M.P.) now goes to over 80 governments, with other relevant documents for their examination and report at the Council's Nineteenth Session, which is to meet in New York next spring.

The debate has been described by U.N. officials as one of the most instructive discussions during the present session. The delegate of Egypt referred to his country's contribution to civilization as having produced mankind's first calendar—that of the Pharaohs—which was still being used by the peasants alongside the Gregorian calendar; and, with so long an experience of using two calendars side by side, he had a perfectly open mind on changing to a more efficient modern calendar when the time is ripe.

The Chinese delegate remarked that his calendar, used by the people at large, went back 6,000 years. The advent of the Chinese New Year was still recorded by the date of the year by a New York newspaper. The United States delegate, who at first thought that the calendar did not belong to the economic and social sphere, but should be considered as a political question, afterwards appeared to have modified his view by promising that

*See United Nations official records E/2514, E/L.628.

his government would carefully examine the whole problem, but any calendar change affecting the U.S.A. would require a decision by Congress.

The U.S.S.R. delegate—who had just exchanged bitter words with the American during the previous agenda item on infringement of trade union rights—now found himself voting with the majority, stating that Russia favored eventual reform of the calendar, which, in his view, ought not to be postponed. Pakistan, however, supported by China, at first wanted no action and spoke feelingly against the proposal as being inopportune and unnecessary. But the pacifistic diplomacy of the Indian delegate, who explained that his government were not seeking to force any particular calendar on the nations at this time, but merely wanted fair investigation of the advantages or otherwise of reform, so that a later session of the Council could decide what was best for everybody, won over the opposition to agree to a slight change of phraseology.

The British delegate tactfully intervened at one stage between India and Pakistan in bringing about this reconciliation. Delegates smiled broadly when India complimented the United Kingdom on playing its “historic role of peace-maker.”

All this means that the next half-dozen months will be devoted to intensive studies of the calendar problem by the world's governments, leading to, possibly, the setting up of some international committee at the next session to collate and analyze the replies.

The World Calendar Association, Int'l., which enjoys consultative status with ECOSOC, has already begun a number

of research studies pointing to the economic, financial, administrative and other advantages of the Indian plan. Moreover, its national branches in many countries will seek to provide their own governments with facts and figures to be considered by them in preparing their reports for the United Nations.

A 16-page memorandum, entitled, “Economic and Social Advantages of The World Calendar,” has currently been issued from Geneva as a pilot study in this field, giving concrete examples of the saving in time, money, and human energy, in a number of industrial and other economic enterprises, if and when The World Calendar is put into operation, as envisaged, on Sunday, 1 January 1961, when the old and new calendars again coincide. (See pp. 124-133 of this issue of this *Journal*.)



WORLDS DAY: as depicted by an Associated Press Newsfeatures Cartoon that appeared in many American newspapers.

THE INDIAN PROPOSAL FOR WORLD CALENDAR REFORM

By Professor Meghnad Saha, F.R.S.

*Member of the House of People of India (The Parliament), Honorary
Director of the Institute of Nuclear Physics, Calcutta, representing the
Indian Council of World Affairs at Geneva, 7 July 1954*

MR. CHAIRMAN, I have been a supporter of The World Calendar Plan, as presented by The World Calendar Association, for over two decades, both as an astronomer and as a social worker. Let me state my reasons:

(1) *Two types of Calendars.* It should be realized that calendars are used for regulating two essentially distinct types of human activities, *viz*: (a) Civic and administrative, and (b) Social and religious.

In ancient and medieval times, different countries and religions had developed their characteristic calendars to serve both purposes, but in the modern age, due to historic reasons, almost all countries use (a) the Gregorian calendar for regulation of civic and administrative life, and (b) their own characteristic calendars for regulation of social and religious observances.

Even in Christian countries, which apparently use the Gregorian calendar for both purposes, in actual practice, for fixing the date of Easter and other holidays which move with it, some additional time reckonings have to be done. These reckonings constitute the ecclesiastic calendar, and are a survival of earlier luni-solar calendars.

(2) *Objective of The World Calendar Plan.* The United Nations organization is, by its own Charter, prevented from interfering with the social and religious life of nations. The World Calendar Plan has not the slightest intention of doing so. It simply seeks to substitute for the civil Gregorian calendar, The World Calendar, in the hope, as will be seen, that it will lead to simplification of civic and administrative life for all, and promote understanding amongst nations.

(3) *The Gregorian Calendar analyzed.* Let us see what are the disadvantages of the Gregorian calendar as used for civic and administrative purposes. They are: (a) that the years and months begin on different weekdays, and (b) that months are of unequal length, from 28 to 31 days, and they start on weekdays which are most changeable.

This happens because a normal year of 365 days consists of 52 weeks plus one day; and a leap year coming every fourth year has 366 days, and consists of 52 weeks plus 2 days. If a normal year begins on a Sunday, the next year will start on Monday, and the year after a leap year will jump two weekdays.

This causes a most undesirable wandering of the weekday on which the year

begins, as is seen for the next few years. This year, 1954, has started on a Friday. We shall have

- 1955 starting on Saturday
- 1956 starting on Sunday
- 1957 starting on Tuesday
- 1958 starting on Wednesday
- 1959 starting on Thursday
- 1960 starting on Friday
- 1961 starting on Sunday

How much better it would be for civic and administrative life if we could have a device by which every year could start on a Sunday!

(4) *The World Calendar Plan.* This is how The World Calendar Plan proposes to prevent this wandering of the starting-day of the year. It is a very simple device.

Let us, from 1961, which starts on a Sunday, call the last day of the year (i.e. 31 December), which would be under the present system a Sunday, *Worldsday*. That is, we do not give it a weekday denomination. Then 1962 also will start on a Sunday, and so will every year till we come to the next leap year, 1964. On that year, we shall insert an additional day, the Leapyear Day, at the end of June, and have the usual *Worldsday* at the end of the year; then 1965 will also start on a Sunday.

So, by this simple device of having a *Worldsday* at the end of every year and a Leapyear Day at the end of June every fourth year, both without any weekday denomination, we can make every year start on a Sunday. This will prove to be an inestimable advantage for the civic life of mankind.

Let us now turn to the months. I do not wish to trouble you by giving illustrations of the chaotic way in which the

starting weekdays of months vary. They are chaotic, because lengths of months vary from 28 to 31. There is not the slightest scientific justification for these varying lengths. They are said to have been due to the caprice of two Roman dictators, or some other historical cause not yet clear. How much better it would be for civic purposes, if each month could start on a fixed day of the week?

I need hardly dilate on this point. It must be self-evident.

The World Calendar Plan proposes to put this right by dividing the year into four quarters, each of three months of 31, 30, 30 days duration. According to this plan,

January, April, July, October would have each 31 days, and start on Sunday,

February, May, August, November would have each 30 days, and start on Wednesday,

March, June, September, December would have each 30 days, and start on Friday.

If this plan be adopted, the calendar will be perpetual and foolproof. What a welcome change it would prove when compared to the present chaotic and wandering calendar!

(5) *The World Calendar Plan violates no scientific principle.* Let us see if The World Calendar Plan violates any scientific principle.

Our answer must be no. The year has to conform to the period of the Sun, and this is covered by the leap-year rules, amended by Pope Gregory XIII in 1582. The leap-year rules, introduced by the Iranian poet-astronomer, Omar Khayyam, in 1079 were more accurate, but less convenient. The Gregorian leap-year

rules will cause a mistake of only one day in 3,000 years, which is trivial.

As regards the duration of months, The World Calendar Plan is a marked improvement on the chaotic lengths and starting days of months, inherited from the Julian calendar, which has been tolerated too long.

(6) *Objections to The World Calendar Plan.* Why, therefore, do several of our esteemed friends raise objections to The World Calendar Plan?

The objections chiefly come from several Jewish organizations, on the ground that The World Calendar Plan interferes with the unbroken seven-day week by introducing World-day and Leap-year Day without any weekday denomination. This, they say, will interfere with *their* religious life. Let us examine these objections.

The seven-day week is not a natural cycle, like the year, which is determined by the Sun and which cannot be interfered with, for the Sun is the arbiter and sole spring of human activities. Even Pope Gregory XIII had to bow to science when, to restore the dates to proper seasons, he had to proclaim Friday, 5 October, as Friday, 15 October. Nor is it a natural cycle like the month, which was determined, in all earlier calendars, by the moon. But the moon, as a time-marker, is very erratic, as expressed succinctly in the term "lunatic"! So an Egyptian wise man, whose name we do not know, dropped the moon as a time-marker some 5,000 years ago; and wise men, from Hipparchus and Ptolemy down to modern times, have applauded his decision. Nobody thinks of going back to *lunar months* for civic purposes; not even the Jews, who use the lunar

month, however, like Hindus and Arabs, for religious purposes.

(7) *The Seven-Day Week is needed on psychological ground.* The seven-day week is an artificial man-made cycle. The necessity of having a shorter cycle like the week arises from the psychological need of mankind for having a day of rest and religious service after protracted labor extending over some days. The ancient nations tried to solve it in different ways.

(8) *How the Seven-Day Week came into existence.* The ancient Egyptians had a week of ten days which was revived during the French Revolution. The Vedic Hindus had a week of six days. The ancient Babylonians marked out the first, eighth, fifteenth and twenty-second day of every month, which was lunar with them and started after the new moon, for religious observances. This was a kind of seven-day week, but the last week consisted of eight or nine days, depending on whether the month had 29 or 30 days. The days of the week had no particular name. The continuous seven-day week was evolved by the astronomers of Chaldea, as the country of Babylon came to be called from the seventh century B.C., on *astrological* grounds which are well known. I do not want to trouble you with this account, but it is available in a leaflet published by me. The Jews, who came into intimate contact with the Babylonian civilization from the days of their captivity down to the reign of the Seleucid emperors, adopted it as a cardinal principle of their faith, and were responsible for its propagation. But even the writers of the New Testament do not know any weekday, for they say that the crucifixion of Christ took place on the

day before the feast of Passover, which was, and is still, celebrated on the full-moon day in the month of Nisan. Assignment of this day to a Friday has been shown to be a fifth century device.

(9) *Introduction of the unbroken seven-day week.* The weekdays were first introduced into the Christian world by the Roman emperor Constantine in the year 321 A.D., but he shifted the sabbath for Christians to the first day of the week. The weekday is not mentioned in ancient Indian Scriptures or epics like the Mahabharata or in inscriptions of about 200 A.D. A weekday is first mentioned in an inscription dated 484 A.D. It is a foreign importation to India, and is sparingly used in Hindu religious practices, which are still guided by the moon's phases.

(10) *The World Calendar Plan does not interfere with religious calendars.* The religious sanction for the seven-day cycle is therefore either non-existent, or slight, amongst communities other than Jews, and even amongst them it is not very ancient. But The World Calendar Plan has no intention of interfering with the characteristic calendars of communities or nations. They can exist side by side with The World Calendar. For such

communities as intend to maintain the continuous seven-day week, their religious weekdays, including Sundays, would no doubt wander through The World Calendar weekdays, and cause some inconvenience to the very, very small fraction of people who would want to observe their religious rites according to established use.

But these inconveniences can be adjusted by agreement, and it would be egoistical on the part of a particular community or communities to try to impede the passage of a measure of such great usefulness to the whole of mankind on the plea that The World Calendar Plan interferes with the continuous seven-day week. Calendars are based on Science, which everybody must bow to; and on Convention, which may be altered by mutual consent. The unbroken seven-day week is a *Convention*, but The World Calendar Plan has proposed a far better *Convention*, which should be examined on its own merits by an *ad hoc* committee of specialists.

Let us follow the wise Chinese maxim: "Religions are many; Reason is one." World harmony can be promoted only by sweet reasonableness.

NEWS BULLETIN

PERTH, Australia.—Professor A. D. Ross, chairman of the Australian Committee for The World Calendar, presented the subject of calendar reform to the Second Pan Indian Ocean Science Congress, held in Perth in August. Professor Ross came from Glasgow in 1912 as head of the Physics Department of the University of Western Australia. He received the Kelvin Medal in 1914, and during World War II was on scientific assignments for the army and navy.

GENEVA.—The United Nations Information Service is distributing to radio stations throughout the world a 15-minute recorded program on calendar reform. The program includes interviews with the President of The World Calendar Association, with a representative of the India delegation at the U.N., and with Dr. Clarence Decker, former President of the University of Kansas City.

THE INDIAN PROPOSAL FOR WORLD CALENDAR REFORM

By Elisabeth Achelis

Statement by the President of The World Calendar Association, International, to the Committee on Non-Governmental Organizations of the Economic and Social Council, meeting on Wednesday, 7 July, 1954, at Geneva.

MR. CHAIRMAN, in accepting the honor of addressing this Committee in the name of The World Calendar Association, my first words must be to explain the absence of a far more distinguished leader of the world-wide movement for calendar reform, who is not able to be present in Geneva, as we had hoped, to speak in support of the Indian proposal. I refer to Sir Harold Spencer Jones, the Astronomer Royal of Great Britain, who, since observing the total eclipse of the sun over Greenland last week, has been too preoccupied with other engagements to get here for this meeting, as he had intended. With your permission, Mr. Chairman, I will read a letter which Sir Harold Spencer Jones has asked me to put before the Committee. In it he says:

I am sorry that it is not possible for me to be in Geneva, but, as you know, there will be a total eclipse of the sun about that time, and I shall be observing it in Greenland.

There are very few people, I think, who would claim that our present calendar is perfect. Its defects and inconveniences are too obvious. Many schemes for its reform have been proposed and discussed and it is the scheme advocated by The World Calendar Association which has received by far

the widest support. It has the great merits of simplicity and of involving the minimum changes in the present calendar.

No scheme for reform would be acceptable unless there is an agreement amongst the principal nations to adopt the same scheme and to introduce it at the same time. For that reason the support of the United Nations is essential.

It would not be possible, in view of the heavy agenda of the Economic and Social Council, for full discussion of The World Calendar to be held during the meeting of the Council. I hope, therefore, that the Council will agree to set up a special Committee to consider fully all aspects of the question and to report to either the next session of the Council or the following session. With best wishes for success.

(Signed) Sir Harold Spencer Jones

It is significant, Mr. Chairman, that men of science and practical affairs are among the first to appreciate the importance to the human race of the reform which is now before you, and publicly urge its acceptance. It was a compatriot of Sir Harold Spencer Jones and a world-figure in business affairs—the late Lord Desborough—who was for many years an ardent advocate of calendar reform. Lord Desborough was President of the International Chamber of Commerce that took the initiative at its Congress in 1910, urging the world's governments to adopt,

by international agreement, a perpetual and ordered time-system in place of the present irregular and inefficient calendar.

Indeed, The World Calendar, now proposed by the government of India for universal adoption, has behind it the consistent support of leaders of thought and action in many fields, who have recognized the contribution that this reform will make towards economic and social advance in all countries.

The World Calendar takes its place as a natural, though much overdue, sequel to previous reforms of the same nature which have been arrived at by international agreement before the days of the United Nations. I should like to remind the Committee that the last major reform affecting the world's time-system was the adoption of Universal Time—sometimes called "Greenwich Time"—exactly 70 years ago. It is noteworthy that the United Nations emblem itself records that important event in the growth of world unity. In its emblem, the land areas are aligned on the zero meridian and the International Date Line—where a six or eight-day week is experienced—was fixed by international agreement in 1884. When it was accepted, one New York newspaper made this comment:

The universal acceptance of the Greenwich Meridian . . . recognized one of the first and most fundamental instances of genuine international action compelled by the growing inter-relationship of people.

I do not have to trouble this Committee with proofs—which are obvious to all professional and businessmen, administrators, travellers, and working people alike—of the incalculable advantages which accrued from that reform. Then, we dealt with clocks; now, we are dealing with the calendar.

I should, however, like to call the special attention of the Committee to the fact that no individual government could have claimed a public mandate at that time for carrying out that sensible reform. As Lord Merthyr, the Chairman of the British Committee of my organization, has recently said:

Must we wait for calendar reform until the mob is clamoring at the gate? In this type of reform, the governments must lead—not wait for public opinion.

Again, in advocating the acceptance of Universal (or Standard) Time, that eminent Canadian engineer, Sir Sandford Fleming, said:

We have inherited from our forefathers certain ideas and usages in relation to time and its measurement which the progress of events has rendered effete and inadequate. These long continued customs answered their purpose in the condition of mankind when they were originated. We have, however, now entered upon a period in world history entirely different in its conditions, and it is not surprising that the usages of bygone centuries are found to be incompatible with the new order of things.

Those words, Gentlemen, spoken seventy years ago, fit exactly the position of calendar reform today. What a group of railroad men accomplished in 1884 in giving the world Standard Time, the Economic and Social Council can do in 1954 by initiating action to give mankind a standard calendar.

However, at the inauguration of Universal Time, it is recorded that there were some narrow-minded people who declared that, if this international agreement went through, men would be trying to change "the immutable laws of God." That purely emotional opposition has long since been forgotten; but the benefits of stabilizing clock-time for the world are now part of our common civilization.

As the Committee is aware, some objections to the Indian proposal have been raised by certain religious groups who would find it inconvenient to reconcile the new civil calendar with some of their special calendars. On that particular point, I should like, very briefly, to direct the Committee's attention to four considerations:

First, in the words of Sir Harold Spencer Jones, when speaking recently at the Hayden Planetarium, New York City:

The question of the calendar is primarily a civil matter. Religious calendars, such as the Jewish, Moslem and Hindu, can exist alongside the civil calendar and be independent of it.

Similarly, the Permanent Delegate of India, Dr. Rajeshmar Dayal, in a broadcast over the United Nations radio last March, emphasized:

Our proposal will not adversely affect the religious calendars of any sect, for they would always be at liberty to follow their own religious calendars.

Secondly, objections of this order are clearly "committee points." The time of the Economic and Social Council ought not to be spent on questions on which even the objectors do not agree among themselves. Supporters of the present plan would welcome a careful examination of opposition viewpoints before major decision is arrived at. An *ad hoc* committee of specialists, set up by the Economic and Social Council on the basis of the Indian proposal, would naturally consider alternative suggestions which might be forthcoming from one quarter or another. That would seem the most fair, just, and democratic way to handle a primarily technical reform of this kind.

Thirdly, it should not be assumed that

those who express strong feelings when changes are proposed have either justice or commonsense on their side. For example, a suggestion has just reached me from England, which appeared in a letter written by a Jew and published in the issue of *The Jewish Chronicle* for 25 June, 1954, containing a detailed proposal for extending the Jewish Sabbath to cover two days, so as to meet the rabbinical objections which have been made before this Committee. The writer of the letter concludes:

Under my simple suggestion, I claim that the proposed calendar reform will not impair in the least the sanctity of the Sabbath, and its *status quo* will be fully observed.

This, Mr. Chairman, is one passing example of the reasonable and tolerant attitude which ought to be encouraged, if and when the proposal is examined by a specialist and impartial international committee.

Fourthly, it cannot be without interest to members of the Committee that last week considerable prominence was given in the press of the whole world to a closely-reasoned announcement appearing on the front page of the Vatican's *L'Osservatore Romano* (28 June)*:

The Church has no reason to oppose in principle a modification of the calendar. If there were a general desire for reform, motivated by the special requirements of the peoples of the world, the Catholic Church would not fail to consider the question, providing naturally that certain conditions which she herself cannot overlook, are observed.

This gratifying announcement will, in the view of our organization, Mr. Chairman, have a powerful effect upon not only large religious communities—both Catholic and non-Catholic—but upon

*See page 138 for official Vatican translation.

governments as well. Although calendar reform is a civil matter, the movement is greatly heartened by this important declaration which, may I add, specifically refers to the Indian proposal now before the Economic and Social Council.

That consideration brings me, finally, to the question of *timing*. It has long been the view of my organization that the strongest effort should be made to bring about this much-needed change on Sunday, 1 January 1956, when the old and the proposed calendars coincide and the transition from one to the other would be most easy. This date was, in fact, specifically mentioned in the Indian memorandum. But my organization wishes to make its position clear on that point. This question has already been postponed from earlier consideration by the United Nations; it was the subject of a full report to the Council by the Secretary-General in 1947; and it now appears for the first time on the Council's agenda in 1954.

A realistic approach in putting the proposal into effect would have to follow somewhat the following lines, which I respectfully submit for your earnest consideration:

(1) It is highly desirable that an *ad hoc* committee of specialists should be established forthwith to go into the question of ways and means and to report its findings to the Council's 20th Session* (that is to say in 1955) so that a definitive decision may be taken at that 20th Session.

(2) After the member governments have had a year to consider the plan, the 10th or 11th Session of the General As-

sembly (falling in 1955 or 1956) could then take up the matter, possibly in the form of a draft resolution or convention.

(3) Assuming the majority acceptance of such a convention, not later than 1956, it is our view that one or two years would be taken up by the implementation of such an international convention in terms of national legislation and by, possibly, the accession of later signatories or ratifications.

(4) That would bring us to about 1958—bearing in mind that social legislation does not normally operate immediately—so that the changeover could take place with smoothness and, we would hope, by majority, if not universal, acceptance on the first day of January, 1961, when the old and new calendar again coincide.

I urge the most careful consideration of these suggestions which are, as I have remarked, Mr. Chairman, "realistic" in their purport, though tentative in their nature. Such procedural details are, of course, matters for the proposed *ad hoc* committee. For example, manufacturers of Nautical Almanacs usually go to print about *four years* ahead; so the Committee would have to take account of all these factors in making their recommendations to the Council for the changeover.

I therefore conclude my address on a practical note, with every confidence that when the Council comes to discuss this question in plenary session, a decisive step will be taken *this year*, which will result in the world receiving at long last a perpetual, regular, harmonious and balanced civil calendar, which will add further success to the worthy achievements of the Economic and Social Council.

*See Resolution, Page 110.

THE HEARING

UNITED NATIONS

INFORMATION CENTRE
European Office of the United Nations
Geneva

Press Release No. ECOSOC/698
7 July 1954

(For use of information media: not an official record)

ECONOMIC AND SOCIAL COUNCIL Eighteenth session

Council Committee on Non-Governmental Organizations

Item 15—World Calendar Reform (item proposed by India):

Mr. M. N. SAHA (Indian Council of World Affairs) supported the proposal of the Indian Government for the establishment of a world calendar. He emphasized that he was speaking as an astronomer and as chairman of the committee in India which was endeavoring to unify the different existing calendars. Calendars were of two types: those regulating civil and administrative life and those regulating social and religious life. The need of our age was to establish a calendar on a scientific, instead of a purely conventional basis. The calendar had to be simplified so as to facilitate the civil and administrative life of all.

RABBI S. SAFRAN (Agudas Israel World Organization) spoke against the proposed reform as it appeared on the agenda of the Economic and Social Council, since it meant the end of the seven-day week and hence the abolition of the sabbatical tradition. The numerous organizations which he represented were not opposed to a reform of the calendar, but they were opposed to the reform put forward, since it involved the disappearance of the tradition of the Sabbath, so important for Jewish communities throughout the whole world.

Mr. SUGRANYES de FRANCH (Pax Romana) said that he was speaking only as representative of his organization and not for the Catholic Church. He was not opposed in principle to a reform of the calendar, but such a reform should respect the spiritual values, on which it might have some effect.

Miss Elisabeth ACHELIS (World Calendar Association, International) said that her organization supported the proposal of the Indian Government, and suggested the setting up of an *ad hoc* committee to examine all aspects of the problem and report to the Council during the following year. Measures should be taken under the auspices of the United Nations, the only body in a position to ensure the acceptance of this world-wide solution, before 1961, the year during which The World Calendar and the ordinary calendar would coincide.

Mr. M. L. PERLZWEIG (World Jewish Congress) said that he supported on

behalf of his organization, whose members were drawn from 60 countries, the principles laid down by the representative of the Agudas Israel World Organization. He emphasized the economic consequences for Jewish communities throughout the world of adoption of The World Calendar proposed by the Indian Government. He was not opposed to a reform of the calendar, but the proposed reform was not a scientific one, and would merely establish one more convention no better than others. He did not consider that public opinion had declared itself in favor of this reform. The Council and the General Assembly should consult Governments on the wisdom of the measure, and above all take account of public opinion.

Mr. Roger GORSE (France) did not consider the setting up of an *ad hoc* committee advisable until the States Members of the United Nations had been consulted by means of a questionnaire distributed to their Governments.



The United Nations ECOSOC Council Meeting on The World Calendar in Geneva, Switzerland. Left to right: Elisabeth Achelis, Founder and President of The World Calendar Association; Professor Meghnad Saha, F.R.S., Member of the House of People of India (Parliament), Honorary Director of the Institute of Nuclear Physics, Calcutta, representative of the Indian Council of World Affairs; and James Avery Joyce, F.R.G.S., International Liaison Officer of The World Calendar Association.

YOUR VITAL STAKE IN THE WORLD CALENDAR

Some Economic and Social Advantages of Adopting The World Calendar,
as Proposed by the Government of India at the 18th Session of the
Economic and Social Council at Geneva, 1954

*By James Avery Joyce, International Liaison Officer,
The World Calendar Association, International*

I. INTRODUCTION

(1) Economists, statisticians, lawyers, administrators, and business men find that the hit-and-miss character of our present calendar is one of the glaring misfits of this modern age. Science and research have reduced many subjects of time and sense to exact calculation and careful formulae, but the precision which we have come to expect in many walks of life is sadly lacking from one aspect of our common experience—that of the calendar, the basis of all our calculations in the economic and social sphere.

(2) The Indian Government's "Memorandum on the Question of World Calendar Reform" (E/2514) circulated by the Secretary-General of the United Nations on 28 October 1953, states:

The ideal of the whole world is to have a logical and perpetual calendar to replace the present Gregorian Calendar, because it is widely recognized that the calendar we now use is unsatisfactory for the economic, social, educational, scientific and other activities of man. Modern progress demands the change. Such a revision has been the subject of study and research on

the part of experts, institutions and international organizations for many years. The consensus of opinion is that a new time system is necessary, adhering to the customary twelve months; but that it should be uniform; an invariable calendar, perpetually the same, more regular, scientific and advantageous from every point of view than the present Gregorian Calendar.

(3) *What* then are the advantages of the proposed new calendar over the old, and *why* has a matter of this kind been brought before ECOSOC at the present time?

(4) Ever since the International Chamber of Commerce in 1910 passed resolutions in favor of calendar reform and calling for an international convention to bring it about, answers to the above questions have been pouring in on the calendar reformer, who has a vital and urgent contribution to make to the social progress of our times. If the present memorandum contains only a scanty cross-section of some of those innumerable answers, it is because a whole volume on the subject would still leave many aspects to be explored. Systematic

and comprehensive research, both national and international, has hardly yet been attempted. Yet, if there ever existed a field of economic and social activity which would more speedily and amply repay in terms of human convenience and hard cash careful and thorough-going investigation by the world's governments and by the various organs of the United Nations, *this* is the field. By encouraging or authorizing such a global enquiry, with a view to future action by the United Nations, the 18th session of the Economic and Social Council would undoubtedly add lustre to its fine record of practical achievement.

II. EXAMPLES OF WASTE AND INEFFICIENCY

(5) Let us take, quite briefly, one or two specific instances of the absurdities of the present calendar and its wastage in terms of money, manpower and efficiency, before turning to the benefits conferred by the proposed new calendar. In every business, trade, or profession, it is essential from time to time to compare output or operations in one year with those of a previous year. In the general run of industry, a check must constantly be kept on progress. For practical costing, accounting, and auditing purposes, comparisons must be available not only year by year, but, just as importantly, half-yearly, quarterly, and, usually, month by month. Such normal and essential statistical comparisons are made difficult, if not impossible, by the crudities of the present calendar, for the reasons which follow.

(6) The most striking feature of this almost universal "standard" of time-measurement—inherited from Julius

Caesar 2,000 years ago, and since modified slightly by Pope Gregory in the sixteenth century—is that EACH YEAR IS DIFFERENT! This amazing instrument for regulating human affairs has 52 complete weeks, but must borrow one or two days from another week to complete the year. Thus, it changes every year, and each year begins on a different weekday from the year before. National "holidays" or anniversaries fall on different days of the week, which is absurd. If one fixes the *day* of the week (e.g. for the opening meeting of the U.N. General Assembly), the date varies from year to year. If one fixes the *date*, then the day varies, and days have different values for different purposes. In an ordinary year, the first "half-year" has 181 days; the second 184 days. The "quarters" are unequal in length. Each "quarter" begins and ends on a different weekday. The months have a varying number of weekdays, from 28 to 31; and working days vary from 24 to 27. These irregularities, which have no rhyme or reason, prevent comparison of periods and necessitate continual changes in routine matters in, literally, millions of offices and businesses through the world.

(7) Consider as a case in point, the question of STOCKS. The British Board of Trade *Monthly Digest of Statistics* pointed out recently that: "Figures of stocks relate either to the end of the calendar month or to the end of a four or five weekly period." But it is not often realized how inconsistent the calendar can be until one tries to make actual comparison of a particular month in different years. Take a group of Januaries. In January 1947, there were four Saturdays and four Sundays; in 1948, five Satur-

days and four Sundays; in 1949, five Saturdays and five Sundays; and in 1950, four Saturdays and five Sundays. This sort of variation can happen with all the 31-day months. How can we measure economic factors with an expanding or contracting yardstick?

(8) Similarly, in calculating PRODUCTION or compiling progress records, whether by months, "quarters," or "half-years," the ordinary calendar is as inefficient as it is time-wasting. For this reason, many big firms—e.g. the famous Eastman-Kodak Company—divide their production and general accounting periods into even (equal) four-week periods. But the fact that no two consecutive years begin on the same day of the week still makes long-term comparisons difficult. And the fact that there are 13 four-week periods in one year complicates quarterly or half-yearly payments and other reckonings in the firms who have resorted to this device in order to escape the penalties of Caesar's methods in the Atomic Age.

(9) If this picture of confusion and wastage in the world of BOOKKEEPING is thought to be exaggerated, it must be remembered that many thousands of persons are necessarily employed as accountants, secretaries, and bookkeepers—people who enter up and look after the ledgers—in banks, insurance departments, stockbroking offices, accounting offices, and the like, in all countries. They constitute, in fact, a large proportion of the personnel in all industrial states.

(10) Let us take one further example in this field: the calculation of MONTHLY INTEREST. February has 28 days; the months on each side of it have 31. There is a difference of more than 10 per

cent between them. Again, those well-known commercial terms "sixty days" and "ninety days" rarely mean the same thing in any two parts of the same year or in consecutive years: "sixty days" from, say, 10 January, will not end on 10 March, nor will "ninety days" from 1 August terminate on 1 November, or even 31 October. The figures 60 and 90 are merely rough terms intended to connote two months or three. But why should so exact a science as modern finance be content with "rough" terms like these? Moreover, in these transactions, some part of a clerk's time must be occupied in ascertaining on what date a particular term will expire. Such continuous waste of effort might well amount to *one or two per cent* of the whole time involved in dealing with a particular transaction—a formidable accumulation of wasted time when multiplied by the vast number of transactions taking place in, say, the capitals of London, Paris, or Brussels, on any one day. Does not this chronic state of affairs cry out for investigation and remedy?

III. RETAIL TRADE: A SPECIMEN INVESTIGATION

(11) Selecting one typical example from the RETAIL TRADE, according to a recent British Board of Trade return, there are in Britain 14,587 "men's wear" shops, selling men's and boys' clothes, shirts, and sundry articles of masculine attire. They employ 66,749 men and women, who receive in wages and salaries £17,043,000. The public spends no less than £191,424,000 per annum in these shops. Over 8,000 are one-man establishments, the rest are multiple organi-

zations, with anything from two to fifty or more branches and innumerable shop-windows. Taking in some detail the case of one of these latter firms, worth about two-and-a-half million pounds sterling, with about 75 retail branches and half a dozen factories devoted to the making of various classes of their wares, this firm's shops are to be found in good sites in all the biggest cities of the United Kingdom (London, Birmingham, Manchester and Glasgow) and single branches exist in many smaller towns.

(12) In this setting, let us consider what happens with the Christmas trade. Under the present calendar, Christmas Day can fall on any day of the week. In 1952, for example, a leap year, it fell on a Thursday, so the men's wear trade had three good selling days during the actual Christmas week, against only one the previous year, when Christmas Day fell on a Tuesday! Consequently, comparison of the figures of sales was no easy task for the accountant who had to undertake it, in the endeavor to find out whether his business was improving or declining. Again, taking the December figures as a whole, December 1951 began on a Saturday, and in 1952 on a Monday, which gave two Decembers of quite different week patterns. Although this is only a small section of the retail trade, December can be a busy and important month for millions of shopkeepers in all Western countries, especially for establishments which remain open on Boxing Day (as in Scotland) or close on New Year's Day, as in certain big cities.

(13) "Every year a similar problem arises," asserts the expert from whose report the above example has been taken. He goes on to assert:

The only comparisons that can be made with any fairness must cover a wider period than the precise Christmas weeks, because the shifting of the Christmas holidays throws everything out of gear. If, however, Christmas Day were fixed on a particular day—whichever day of the week it might be—then comparisons with corresponding weeks or months of previous years would present no difficulty. All these vagaries take a great deal of the time of costing clerks, bookkeepers, and accountants. With years, half-years, and quarter-years ending on regular dates, as your proposal allows, all the difficulty and extra work would be obviated.

The same authority in summing up the proportion of time absorbed on these unnecessary calculations by accountants and bookkeepers in this particular type of business, gave it as nearly *five per cent* of the total. As at least one in twenty—or five per cent—of the personnel were employed as bookkeepers, ledger clerks, or accountants, of a total wages figure of over £17 million, a sum of approximately £850,000 is spent on bookkeeping activities. Five per cent of this figure is just over £42,000. In other words, *the present calendar costs this minor branch of the retail trade in one country alone something in the neighborhood of £42,000 a year*. Other numerous sections of the retail trade, covering a wide range of commodities in popular use, and, behind them, vast industries with a capitalization of millions of pounds sterling, are also suffering from similar inefficiencies in our out-of-date system of time measurement. Who shall measure mankind's total loss?

IV. THE PRINTING TRADE

(14) Here it is relevant to refer to an entirely different but widespread trade—namely, PRINTING. Many large print-

ing establishments, who reckon to keep their machines running day and night through the working-week of five days, had to shut down their machinery on Christmas Day in 1952, which fell on a Thursday, start it up again on the Friday for one day's work, and then shut it down again on the Saturday. This process is, apparently, a very expensive one. Alternatively, they could have kept their machines running during this isolated day, also incurring unnecessary expense. But under such a reform as is now proposed, Christmas Day always falls on a Monday, thus adding to the workers' relaxation and enjoyment of the whole week-end holiday, and resulting, from the employers' point of view, in a great saving of money, time, and human energy.

V. A NOTE ON RAILWAYS

(15) "A detailed study of the various ways in which our irregular calendar affects the railroads would fill a fair-sized volume," wrote the Assistant Secretary-Treasurer of one of the American railways. Speaking of the "great boon" The World Calendar would confer, he added:

It is difficult to overstate the gains that would result in efficiency and smoothness of operations. TRANSPORTATION is largely dependent on the figures of past performances. Programs for the future have past and current records for guidance. If comparability is distorted, error follows. Under our present calendar, a difference of 11 per cent exists as a minimum between a 28-day February and a 31-day March. The difference may rise to 19 per cent owing to the incidence of Sundays and holidays. Such variables overhang every calculation—whether of money, working hours, schedules or facilities.

This is an American opinion, but similar conditions hold in Britain. It was a

British railway executive, visiting New York in 1951, who expressed a British point of view in the following interview with an American reporter: "Speaking personally," he said, "*I have been in favor of calendar reform for twenty odd years. And my attitude is shared by a large majority of railway executives in my own country.* As far back as 1921, we investigated this subject with a comprehensive questionnaire, and found that four-fifths of all those who replied wanted an improved calendar."

VI. HEALTH AND HOLIDAYS

(16) Another point, which requires far more careful study than it has yet received, is that of PUBLIC HOLIDAYS. Based on important anniversaries in a nation's history, these usually fall on different days of the week, leaving isolated days on one or the other side of them. Under the Indian proposal, public holidays generally fall at the week-end, thus enabling the people at large to plan these occasional holidays as long week-ends. And even when this does not happen naturally under the new calendar, the same legislation which brings the calendar into effect, in any particular nation, could also legalize the observance of all such anniversaries—as is sometimes the case now—at the beginning or end of the working week. Many salaried workers, in particular, and even weekly wage-earners (who have to make their wage-packet stretch over several weeks in preparing for a short vacation) would gladly welcome such a change.

(17) In this connection, the following passage from an official brochure published by the Canadian Department of

Labour (D. of L. 71-65965) underlines the same lesson:

Employers and employees are all troubled by calendar irregularities, which make the calculation of payrolls, periodic reports and comparisons, and holidays enormously complicated. At present, most holidays fall on different days each year, and when they occur in mid-week they are a frequent cause of industrial shutdowns and absenteeism. The introduction of The World Calendar would see all major Canadian holidays falling on Mondays, Fridays or on week-ends, and most holidays would thus be part of a long week-end.

(18) But holidays are not an end in themselves. PUBLIC HEALTH is one of their invaluable by-products. Stabilizing the week-end vacations would itself bring more dependable relaxation, and—we are informed on medical authority—more fresh air and (maybe) sunshine into the lives of workers who can thereby get away from their jobs for several consecutive days and take their families with them.

(19) HOLIDAY RESORTS are eagerly awaiting the change. The following is a sample extract from the local press of one of Britain's premier holiday resorts and is typical of the popular support for the new calendar which is constantly reaching the offices of The World Calendar Association:

Llandudno Advertiser (13 February 1954):

WORK FOR NEW WORLD CALENDAR!

Consider the advantages of Calendar Reform. Mr. T. Turner Pilling, who regards the matter as one of great importance to seaside resorts, directed the attention of the Publicity Association to it in these forceful terms:

"The New World Calendar would be an immense boon for statistical purposes, for commercial undertakings of all de-

scriptions, in all countries, and particularly to seasonal places such as summer resorts, so I solicit your consideration and support."

VII. ORDERED FREEDOM

(20) Of course, there exist some peculiar individuals who pretend to delight in disorder and confusion. They object to the streamlining of our calendar because they say that such a reform would add to the monotony of life. What an empty argument is this! As if there were not already too much chaos in our economic and social affairs. Civilization and freedom imply progress towards greater public order and self-control. Why not invent watches which register an extra five minutes each day, so as to introduce the same element of disorder and confusion into our daily schedules, as our present calendar introduces into our yearly schedules? Calendar reform, far from leading to dullness and monotony, will add to the zest in life by giving us all a greater measure of foresight and sense of direction over our economic and social resources and enable us to conserve and employ those resources to the best advantage in a largely impoverished world, where sound economics still means devoting limited resources to the most socially beneficial ends.

VIII. ADVERTISEMENTS IN ADVERSITY

(21) A final "test case" can be deduced from some interesting data recently furnished by the principal of a leading firm of advertising agents in Canada. He said:

Today, in the broader aspects which affect humanity and our future, The World

Calendar definitely has a place. It offers a great opportunity to this age. In business it brings not only order and stability, but actual savings in dollars and cents which show on a balance sheet. . . . I shall indicate here a sample of its benefits to advertising agencies.

In demonstrating this, I am using only one medium for the moment . . . we can forget about television, radio, billboards, streetcars, buses, magazines, handbills, direct mail leaflets and booklets, skywriting and posters in subways under the earth. Let us take only the newspapers. In the U. S. and Canada we have about 2,000 dailies and around 9,000 which appear once, twice or thrice weekly* . . . these 11,000 all carry advertising . . . every working day of the year about \$2,000,000 worth of business is handed to newspapers . . . though about seven out of every hundred orders placed are later cancelled.

In newspaper advertising the most important single factor, apart from the content of the ad, is the day of the week on which the advertisement appears. *Each weekday has its own customers and adherents and certain advertisements must be shown on certain specified weekdays*—and on no other day. For instance, accepted best days of the week for food advertising are Thursday and Friday. Automobile products go in on Friday evening and Monday morning papers. Clothing, not being an "impulse item" has no particular day, but haberdashery generally is placed before Thursday. Financial, paint, drugs, hardware, pet food, beverages and a host of other products all have logical reasons for the weekdays on which their advertisements appear. Also there are illogical reasons. . . . Thus, every order has to be checked to see that date and day correspond and are correct for the product.

Then, for the 9,000 weeklies and semi-weeklies, all orders must be double-checked. These fine public watch-dogs come out on Mondays and Fridays, Wednesdays and Saturdays, Tuesdays only or Tuesdays and Thursdays—any and all combinations are

possible. Between the checking and double-checking within the agencies, thousands of hours are needlessly lost and there is still a 7 per cent error. This latter is mainly chargeable to the present mixture of weekdays and dates on the calendar, and to you and me and all of the well-meaning workers around us.

On the basis that \$6,000,000,000 each year spent for newspaper advertising involves writing 20,000,000 orders, and that it takes 30 seconds to check and 30 seconds to double-check each order for day, date, and newspaper, we have a time loss of almost 50,000 days. However, under The World Calendar orders would still have to be checked; but with dates and days in perpetual agreement, it could be done in one-third the time. Therefore, actual preventable loss because of the Gregorian calendar—about 33,000 days each year—is increased in the handling of multifarious forms, involving a further loss of 40,000 days.

When these calendar imperfection losses are added together, the figure assumes impressive proportions—73,000 days. This occurs each year and it is only a part of the whole loss; for to it must also be added the errors concerned with dealing in all kinds of other transactions which depend on calendar accuracy. Magazines which close on the "last Thursday" of the month; trade papers which have to have all material by the "second Monday" and internal publications which appear the "first Wednesday" every second month. Other media which have curious closing dates, discount days for bills payable and receivable, and stated contract acceptances all have their own harvest of calendar mistakes. As far as advertising agencies alone were concerned, *the very least estimate is that enough money could be saved by adoption of The World Calendar to provide every agency in the country with another man free of charge.*

IX. A "PILOT" SURVEY

(22) In 1950, The World Calendar Association, which enjoys consultative relationship with ECOSOC, sponsored a pilot survey of an important segment of American business to determine the na-

*Comparative figures for Britain are: 163 daily and Sunday newspapers, and 1,387 weekly newspapers, in addition to which there are 2,159 general and specialized magazines and 1,452 trade, technical and professional periodicals.

ture and extent of the problems created by the present calendar from the viewpoint of the business man. Its results were as illuminating as they were convincing. The Controllors Institute of America cooperated in this study by allowing its membership to be polled, consisting, in the main, of controllers of the largest corporations representing all lines of economic endeavor. Approximately one-sixth of the membership replied and the returned questionnaires were classified in broad categories as follows: (a) *Manufacturing*—food and tobacco products, textile products and apparel, lumber, furniture and paper products, chemical and drug products, primary metal products, fabricated metal products, machinery and transportation equipment, and miscellaneous manufacturing; (b) *Distribution*; (c) *Public Utility and Railroad Companies*; (d) *Finance and Insurance Companies*; and (e) *Miscellaneous Companies*.

(23) Of the 538 respondents to the aforementioned questionnaire, 466 or 86.6 per cent—an *overwhelming majority*—indicated that the present calendar created difficulties for them. These difficulties ranged from minor annoyances to such major problems as required the adoption of a modified calendar for internal use in the intelligent handling of business affairs. This often resulted, they asserted, in still further confusion because the modified calendar conflicted with the conventional calendar in general use. Of the 466 respondents indicating difficulty with the present calendar, 437 or 93.8 per cent indicated that a stabilized calendar would alleviate these difficulties. The other 72 respondents (13.4 per cent of the total responses) were divided as fol-

lows: 57 (10.6 per cent) said they had no difficulties with the calendar, 6 (1.1 per cent) did not know, and 9 (1.7 per cent) did not answer the relative question.

(24) Although generalization about American industry, or even about the membership of the Controllors Institute of America as a whole, ought not to be made on the basis of this preliminary survey, it can be considered as a most helpful pilot investigation which is *probably* indicative of the kind of response one might expect of a scientifically designed sample of the entire American business population. It is significant, however, that more than 20 billion dollars in capitalization are represented in the response to this survey, and, of this amount, more than 18.5 billion dollars favored calendar revision. Despite the limitations of the sample on which the survey was based, the fact that so important a segment of American business admitted to a wide range of difficulties with the calendar, points clearly to the need for more extensive investigation such as only the United Nations and its member governments can give. (See, for fuller details, pamphlet, "The Present Calendar and Its Effect on American Business," published by The World Calendar Association.)

X. THE REMEDY IS AT HAND

(25) The World Calendar, now proposed by India, stabilizes these irregularities with a calendar which treats each year as a unit, and in which the week (with a background of long established habit and custom) is given full recognition within each year. Sunday has for many years been accepted as the first day

of the week in the civil calendar, and is continued as the first day in The World Calendar. Each year, half-year and quarter commences with a Sunday and ends on a Saturday. Each quarter is made up of 91 days (13 complete weeks) in which the months have 31, 30 and 30 days each. By this method, 52 weeks are completed on Saturday, 30 December. As the length of the year requires one more day than 52 weeks in ordinary years, and two days more in leap years, The World Calendar completes the year by adding another day of rest, on 31 December, to be called (it is suggested) "Worldsday," at the end of every year, and a similar additional day of rest halfway, on 31 June, in leap years. These "days apart" will be seen to be *definite dates*. It is also suggested that they will become world holidays dedicated to greater understanding, friendship, and cooperation among nations. The use of these stabilizing days is the means by which a calendar may have the same day and date arrangement every year and still maintain workable scientific accuracy. By this device, each year is complete in itself; there is nothing left over and the year is fixed in perpetuity, providing for perfect comparability between corresponding segments of years. With every year the same, all economic and other planning is simplified, and a particular date always falls on the same day of the week, however long-term the plan.

(26) The voice of Mr. Arthur J. Hills, a distinguished member of the National Labour Relations Board of Canada, is only one of the growing chorus of far-seeing and competent statesmen, administrators, and men of affairs in favor of this reform, who recently remarked:

Because of the greater convenience and the economic gains to be obtained from the use of such a calendar, with an invariable day and date arrangement, the Canadian Chamber of Commerce has requested the Government to take the initiative in having The World Calendar placed on the agenda of the United Nations Assembly at the earliest possible date.

Organizational support for The World Calendar in Canada has developed great strength in recent years. Besides the Chamber of Commerce, the reform program is supported by the Canadian Manufacturers Association and by the three large labor groups—the Trades and Labour Congress, the Canadian Congress of Labour and the Canadian and Catholic Confederation of Labour. These three organizations together speak for more than 85 per cent of Canadian organized labor.

XI. RELIGIOUS SUPPORT

(27) The foregoing memorandum has been confined to factors falling directly within the scope and competence of the Economic and Social Council and the Specialized Agencies. But it would be a mistake to imagine that we can segregate those aspects of international life from others. The literature of The World Calendar Association bears constant witness, for instance, to the widespread support for calendar reform from religious organizations throughout the world.

(28) The latest and, perhaps, the most important of such constructive contributions to this development for many years past, took the form of a detailed statement, referring specifically to the Indian proposal, which appeared on the front page of the Vatican's journal *L'OSSERVATORE ROMANO* on 28 June last, over the signature of the distinguished scientist and theologian, the Reverend D. J. K. O'Connell, the director of the Vatican Observatory. In the official translation, the following two passages, bear-

ing directly on the growing demand for ACTION, have given a great impetus to the movement, in Catholic and non-Catholic countries alike:

On previous occasions the sponsors of reform have been the Governments of various Christian States. Now, for the first time, the proposal is being made by the Government of a great country with a predominantly non-Christian population. This is a matter of some significance. It shows that the interest in, and desire for, a reform of the calendar is becoming more widespread. . . .

I think it is true to say that the Church has no reason to oppose in principle a modification of the present Calendar. If there were a general desire for reform, motivated by serious requirements of the economic and social life of the peoples of the world, the Catholic Church would not fail to consider the question, provided, naturally, that certain conditions which She Herself cannot overlook, are observed.

XII. CONCLUSION

(29) It is abundantly clear that many powerful trends and influences, industrial and scientific, religious and intellectual, are moving steadily in the same direction. It has not been the purpose of this memorandum to suggest detailed

methods and techniques by which the Economic and Social Council might give shape and direction to these trends and influences. The World Calendar Association is, however, undertaking specific research projects in certain countries where branches of the Association are most active. The Association is also willing to cooperate with and assist in the development of wider researches or investigations whether conducted by private organizations, governmental departments, or the United Nations Organization itself.

(30) The real tasks of calendar reform are just beginning on the operational level. If this immediately vital work of inquiry and research is systematically done, it should be possible for the 20th Session* of ECOSOC in 1955 to have before it sufficient factual material and comparative data from governments and non-governmental organizations—to proceed to the establishment of an *ad hoc* expert body to prepare the international machinery needed to bring this long overdue reform into reality.

*See Resolution, page 110.

OBITUARY NOTE

PANAMA.—The sudden death of Dr. Juan Rivera Reyes has removed a loyal advocate and friend of many years from this Association. As chairman of the Panamanian World Calendar Association, International, he was a most enthusiastic and staunch supporter of The World Calendar, valuing the unity that it would bring to the world. In 1950 he represented the Association before the World Federation of United Nations Associations in Geneva, where he gave a memorable address that was published in the September 1950 issue of the *Journal of Calendar Reform*. He was the founder of the World Federation in Panama and the Secretary of the Panama Society of International Law. In 1952 his booklet, *Un Calendario Perpetuo para el Mundo*, received wide favorable attention in Central and South America. At the General Assembly of the United Nations in 1953, he represented his country with the rank of Ambassador Extraordinary and Plenipotentiary. The World Calendar Association has lost a delightful and a devoted friend. *Frater, Ave atque Vale.*

A JEWISH VIEW ON CALENDAR REVISION

An Open Letter to Certain Jewish Opponents of the Indian Proposal for The World Calendar

By Daniel Sher

*Representative of Israel on the World Advisory Committee of
The World Calendar Association, International*

Mr. Sher's "Seven Questions" was published in Geneva, Switzerland, on 13 July 1954 and made available to all persons, official and non-official, concerned with ECOSOC's deliberations on the Indian Resolution concerning The World Calendar.

GENTLEMEN: The World Calendar is now on the agenda of the Economic and Social Council, and this proposal has received by far the greatest amount of support from governments, organizations, and individuals. Apart from your criticism of the scheme, opposition is negligible. Therefore, as a citizen of Israel, I desire to submit for your consideration *seven specific questions*, and make a reasoned appeal to you.

Question 1: Do YOU BELIEVE that the overwhelming majority of the human race should be prevented from amending their civil calendar, in order to safeguard a right which is exercised by only a part of the Jewish people outside Israel (a small minority in fact) who claim that they would thereby be inconvenienced in observing certain practices of their own religion in a non-Jewish environment—practices which only a fraction of members of the Jewish faith observe, either in Israel or the Diaspora? If so, do you consider that such an attitude is in keeping with the principles of democracy and justice which have heretofore been part

of your own contribution to the development of human dignity and international understanding?

Question 2: ARE YOU ASKING the rest of the world to abstain from reforming a calendar, which is now in universal use, on the grounds that such a reform would interfere with the "human and religious rights" of a minority to practice certain religious tenets with greater ease? Would not such a demand jeopardize the very "human and religious rights" on which you base your claim, seeing that such a concession would prevent the majority from observing the calendar which they desire to use, just as you do yours? In other words, is it to be assumed that the "human and religious rights" of the minority include the right to veto a non-religious and non-sectarian reform desired by the majority?

Question 3: CONCEDED THAT YOU ARE, as far as religion is concerned, within your rights in observing the Jewish calendar, either in Israel or outside, is it honest to invoke *religious arguments* against the reform of a universal civil

calendar, which we ourselves do not observe for religious purposes?

Question 4: IF IT IS THE BASIS of your case that the *survival of the Jewish people* depends upon the rejection of The World Calendar plan, how do you reconcile this astounding claim with the following considerations:

(a) Are you asserting that Judaism, after giving full proof of amazing vitality for thirty-five centuries, after contributing to so many aspects of civilization, and after establishing the State of Israel against tremendous odds, has now degenerated to such a level that a purely technical amendment of a non-Jewish calendar would jeopardize its very existence?

(b) Do you imagine that the great majority of the Jewish people have so low an estimate of their survival value as to support such a view?

(c) If the danger is so great as you pretend, how does it happen that a growing campaign in favor of The World Calendar, which has now begun *in Israel itself*, is not only permitted, but has already elicited growing support in important quarters? And by claiming, as you are, that the opposition to The World Calendar comes from Jews without distinction of religious or political views—are you aware that many Jews, again without distinction of religious or political views, have already written us from Israel, endorsing The World Calendar?

(d) If the traditionalistic observance of the Sabbath were indeed a matter of survival of the Jewish people, how would you explain the *fact* that in Israel proper such observance is far from complete and is furthermore confined to a minority?

(e). Even if this were truly a question

of “survival,” are you insisting that it is the duty of the non-Jewish community, rather than that of the Jews themselves, to put up with inconveniences in the matter of a calendar?

(f) Recalling that the Jewish Diaspora survived for many centuries before the inclusion of the seven-day week under Constantine in the Christian calendar (A.D. 321), why should the Jews not continue to survive, whether or not the week stays without change?

Question 5: AS ONE OF THE REASONS given by Jewish opinion for the formation of the State of Israel was that such an event would give an opportunity to all Jews, who so desire, to lead a fully Jewish way of life, are you seriously inviting the non-Jewish world to forego a reform which it requires for the conduct of its common affairs, in order to suit the convenience of a small fraction of Jews living outside Israel, *after* the setting up of the Jewish State? Are you not thus working against the very *raison d'être* of the State of Israel?

Furthermore, do you feel it is really consistent with Jewish honor and dignity to try to capitalize on our six million Martyrs in appealing on *these* grounds against The World Calendar?

Question 6: IF YOUR CLAIM IS VALID that the new civic calendar, by provoking the opposition of a small Jewish minority, would *increase international tensions*, is it not more likely that the failure, because of opposition by that minority to carry out this reform which would be beneficial to the majority of the world, would increase those very tensions?

Question 7: IF YOU MAINTAIN THAT The World Calendar should be dropped by the United Nations, because there are

bigger international problems of "human survival" to deal with, why not urge that the United Nations drop other items from its agenda, such as, e.g., racial discrimination, rehabilitation of refugees, technical assistance?

Again, your apparent unwillingness to give the reform of the calendar its just and rightful study and careful consideration in an international committee is a strong indication, is it not, that you are afraid of such a study? Does this not suggest a weakness of your premise and a weakness of your arguments?

FINALLY, AN APPEAL: We would draw your earnest attention to the following realities which strike at the root of your opposition:

(a) Whereas The World Calendar is recognized, by scientists and men of affairs over many years and in many countries, as scientifically sound, your counter-proposal of adding an entire week once every few years is utterly impracticable and was decisively rejected, after careful scrutiny, in the days of the League of Nations;

(b) The allegedly changeless princi-

ples which you proclaim as governing Jewish time-reckoning, and especially the observing of the Jewish Sabbath, are themselves questionable on the grounds of both history and physics and have been authoritatively challenged for many years; so you cannot expect the rest of the world to forego forever the advantages of a valuable reform, merely on the strength of this questionable allegation of yours.

(c) Contrary to your own claim, the rate of correspondence between the Jewish Sabbath and Christian days of rest, because of their permanency as to day and date of the year, would increase rather than decrease under the reformed calendar.

(d) There is already set out in The World Calendar literature ample evidence in support of the above propositions, and we shall always be willing to explain to you and to others, who have difficulties in accepting the new calendar, how little you will lose and how much you will gain by joining with the majority who wants this change for the common good of all.

KARANDANA, Ceylon.—Dr. D. C. P. Beneragama, editor and orientalist, wrote recently: "I joined The World Calendar Association about 20 years ago and have written to papers and magazines on the subject from time to time. As there is no branch organization in this country, may I suggest that steps be taken to inaugurate one. I shall be very willing to render whatever assistance I am able to give. I am sure there are others here who are ready to foster the aims of the Association by active participation." The World Calendar Association welcomes Dr. Beneragama's suggestion and hopes that a Ceylon affiliate will be established. It also hopes that other countries without an affiliate will take steps immediately to form one.

MARACAY, Venezuela.—"It is my opinion that The World Calendar can amply meet all the requirements of all official (government), commercial, banking and social fields, etc., because of its balanced character and stability, which are necessary for the world-wide acceptance of the year as a unit of time. I take the liberty of placing myself at your disposal for the purpose of distributing among the general public in this country all the literature on this subject, including copies of The World Calendar itself. . . ."—Manuel Ramirez.



UNITED STATES OF AMERICA

3339 MASSACHUSETTS AVENUE
WASHINGTON 8, D. C.

No. 194/37.

THIS NO. SHOULD BE PREFIXED TO THE ANSWER

July 12, 1954.

Miss Elizabeth Achelis
The World Calendar Association
630 Fifth Ave.
New York 20, N.Y.

Dear Miss Achelis:

I am enclosing a copy of an official English translation of an article on calendar reform that appeared in L'OSSERVATORE ROMANO under date of June 28, 1954. I felt that you might be interested in this article.

With sentiments of esteem and every best wish, I remain

Sincerely yours,

Archbishop of Laodicea
Apostolic Delegate

REGARDING THE PROPOSED REFORM OF THE CALENDAR

By the Reverend Daniel J. K. O'Connell, S.J., Director of the Vatican Observatory

THE proposal for a Reform of the Calendar, made by the Government of India, will be discussed by the Economic and Social Council of the United Nations (ECOSOC) during its 18th Session which opens on 29 June. On various occasions during the past thirty years plans for a Reformed Calendar have been discussed by the League of Nations. Very many plans were considered, but only one has survived, that of The World Calendar Association. (*) It is this plan that is being proposed by India. On previous occasions the sponsors of reform have been the Governments of various Christian States. Now, for the first time, the proposal is being made by the Government of a great country with a predominantly non-Christian population. This is a matter of some significance. It shows that the interest in, and desire for, a reform of the calendar is becoming more widespread. One can well understand that India, which suffers from the confusion due to a multiplicity of calendars, should desire to introduce uniformity in this important matter. It is interesting that the Indian Government should favour The World Calendar, which

is substantially our Gregorian Calendar, with some modifications.

Our Calendar, as far as the length of the year and the division into months is concerned, is, indeed, neither Gregorian nor Christian in origin. The length of the months remains today exactly as they were fixed by Julius Caesar, except that Augustus is said to have taken one day from February to add to the month which he named after himself. The names of the months have remained unchanged since the time of Julius Caesar, except that, after his time, Quinctilis and Sextilis became July and August, respectively. In early Roman times March was the first month of the year, but already before Julius Caesar the Roman year began on 1 January.

Caesar introduced a leap year every fourth year, in order to adjust the length of the calendar year to that of the solar year. This adjustment was not exact. By the sixteenth century the calendar year was several days ahead of the solar year. Pope Gregory XIII set up a Commission to study the matter and to devise a way to correct this error. At the same time he founded the Specola Vaticana, so that astronomical observations might be made to demonstrate the need for a reform of the Calendar. Pope Gregory, in his Calendar Reform Bull of 1582, decreed that ten days should be dropped in that year,

(*) It is not without interest to recall that this scheme was devised by a Catholic priest, Abate Marco Mastrofini. The book in which he described the plan was published in Rome in 1834.

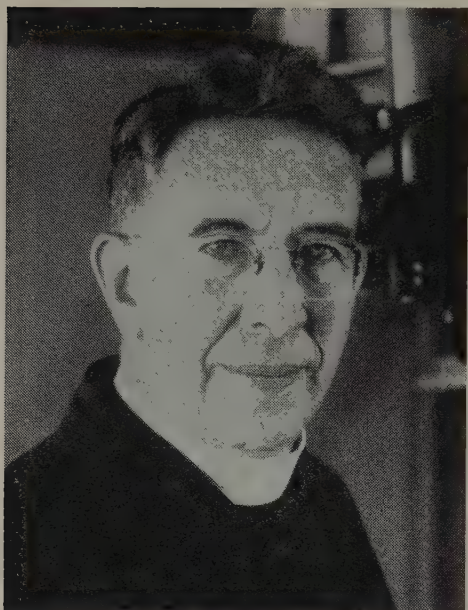
in order that the Spring equinox should be brought back to 21 March. He prescribed a new Leap-Year rule, which is so exact that the calendar year will keep closely in step with the solar year for thousands of years to come. The Bull also decreed new rules for computing the date of Easter, based on fresh calculations of the relation between the lunar month and the solar year.

There have been some attempts to improve on the Gregorian leap-year rule, so as to make the adjustment of the calendar year to the solar year more exact. For all practical purposes such alterations are totally unnecessary. They suffer, moreover, from a serious defect, in that they lack the simplicity which is such a great advantage of the Gregorian rule. In fact, the framers of the new "World Calendar," recognizing the excellence of the Gregorian rule, leave it quite unchanged.

The new scheme proposes: (1) to adjust the lengths of the months so that the year shall consist of four equal quarters, and (2) to count the last day of the year—and, in leap years, the day after 30 June—as extra days not belonging to any week or month. It follows that any particular date would be on the same day of the week each year.

It is not quite correct, if we wish to be precise, to call the proposed reform "a reform of the Gregorian Calendar." What would be altered are not the changes made by Pope Gregory but the length of the months which we have inherited from Pagan Rome, and the sequence of the weeks, which will be altered by the introduction of intercalary days. This distinction is, however, quite commonly ignored. Many of those who advocate the

change, speak of the defects and inconveniences of the "Gregorian Calendar" (for example, the unequal quarters) as if they were the result of Pope Gregory's work. A recent example of this attitude occurs in an article in a widely-read periodical by an Indian writer, Dr. H. A. Ali, of the University of Hyderabad. Dr. Ali writes (*Journal of Calendar Reform*, April 1954, page 24): "The answer to the question as to how the Christian year began to commence with the first of January is very simple. Nearly 1600 years after Christ came the vicegerent of God on earth, known as Pope Gregory XIII. He was a very powerful Pope and he wanted the new year rejoicings to be close to the date on which the nativity of Christ was celebrated. Since the birth of Christ on 25 December is not an established fact, he would have been wiser to have brought the Nativity celebrations closer to the vernal equinox. But the Spring festival was a pagan custom and Christmas had already become associated with snow and hearth-fires. So instead of changing the official birthday of Christ, the New Year was shifted from March, the time when all Nature rejoices, to January, a period when Nature is asleep. And Europe quietly obeyed the Pope in 1582, when the Renaissance had been preaching its gospel of intelligence and freedom for 200 years!" It is perhaps sufficient comment on this remarkable distortion of history to remind the reader of the fact that from before the time of Julius Caesar, who flourished more than 1600 years before Pope Gregory, the year began on 1 January. It is true that in the Middle Ages in various parts of Europe a custom grew up of dating the year "from the Incarnation" (25 March)



WORLD WIDE PHOTOS

FOR CALENDAR REFORM: *The Rev. Daniel O'Connell, head of the Vatican Observatory.*

or "from the Nativity of Our Lord" (25 December). However, before the time of the Gregorian Reform, 1 January had again become, in most of Europe, the beginning of the year.

We can, of course, excuse an Oriental writer for not being familiar with the history of Western civilization. Others, however, who might be expected to know better, write in similar terms, and it is time that the matter should be made clear.

With regard to the attitude of the Catholic Church towards proposals for a re-

form of the Calendar, there are some who think that the Church must necessarily be opposed to all attempt at change. This belief is, in fact, not correct. I think it is true to say that the Church has no reason to oppose in principle a modification of the present Calendar. If there were a general desire for reform, motivated by serious requirements of the economic and social life of the peoples of the world, the Catholic Church would not fail to consider the question, provided, naturally, that certain conditions which She Herself cannot overlook, are observed.

Closely connected with Calendar reform is the question of fixing the date of Easter. The sponsors of The World Calendar Plan state explicitly that they do not attempt to deal with the Easter question. They realize fully that that is a matter which pertains to the ecclesiastical authorities. However, it cannot be denied that the desire for a fixed date for Easter is becoming more widely felt. In the early centuries of the Church there were long and often very bitter conflicts over the date of Easter, until a solution was reached in the Council of Nicea (325 A.D.). Hence, it is, indeed, a very venerable tradition that places Easter on the first Sunday after the full moon after the vernal equinox. The Church, however, which made that rule would also, undoubtedly, have the power to alter it, if there were grave reasons which would make such a change advisable.

A Protestant View

CLARIFYING CALENDAR REFORM

By Elisabeth Achelis

LOOKING backward over twenty-three years of active work to improve the calendar, I take much satisfaction from the progress made since 1930. From a small beginning the cause today has a steady world-wide following with committees, affiliates and cooperating organizations in almost every country of the world. And this has been achieved in the face of disappointments, opposition and the kind of delays which all too often beset worth-while reforms.

It is increasingly recognized that from the economic and practical viewpoints the new calendar will bring enduring benefits to peoples everywhere. Much has been written and said along these lines; however, I am convinced that there is another aspect not sufficiently expressed or understood—the spiritual significance inherent in the balanced, orderly and harmonious twelve-month, equal-quarter calendar.

The present Gregorian calendar, although it bears the name of a Christian Pope, has gradually been accepted by practically all nations in their contacts with the outside world. Its adoption by non-Christian countries is strong evidence that it is regarded as a scientific, secular system of time-measurement. The Gregorian reform was an astronomical adjustment by which the calendar was brought into agreement with the seasons.

The attitude of religious groups was

expressed at the General Conference of Calendar Reform at the League of Nations in 1931. At the conclusion of the meetings in Geneva, I felt it important to discuss the whole matter with religious leaders. I had talked with Mahatma Gandhi in London, before proceeding to Geneva, who informed me of his approval of our work and disapproval of a thirteen-month plan. On my return to New York I approached the Federal Council of Churches of Christ in America.

In due course calendar reform came before the Universal Christian Council in Geneva, the world organization of Protestant and Eastern Orthodox Churches, and the Council passed a formal resolution instructing its officers to study the whole question. The ensuing study took four years of research and consultation, after which a resolution was passed (with but one dissenting voice) approving The World Calendar.

The Roman Catholic Church had already expressed its views. It had stated to the 1912 meeting of the International Chamber of Commerce that "The Holy See declared that it made no objection, but invited the civil powers to enter into an accord on the reform of the calendar, after which it would willingly grant its collaboration in so far as the matter affected religious feasts." This position was reinforced in 1924 when representatives

of the Vatican, Anglican and Eastern Orthodox Churches assured the League of Nations that no dogmatic objection stands in the way of calendar reform.

As for other world religions, the approval of Moslem nations is an assurance that religious sectarianism has no logical place in the revision of the civil calendar. Japan and China have made similar statements, and India (through Mahatma Gandhi and more recently, Prime Minister Nehru) has indicated its support and its belief that reform of the civil calendar lies outside the religious field. The calendar is rightly considered as a scientific and secular system of recording time conforming to astronomical law without religious bias of any kind. Once the new calendar is installed, the various religions can take up the question of revising their respective feasts within the orderly, balanced and harmonious civil system. No government seeks to dictate to them, or to assume any authority over religious calendars. Thus the Association does not deal with a fixed Easter. . . .

Calendars in the ancient past were placed within the authority of the priesthood which comprised the most intelligent and learned men of a tribe or nation. They had opportunities to study and scan the heavenly bodies which influenced the days and the coming and going of the seasons. Thus priestly scientists and mathematicians were the ancient calendar makers, setting aside certain religious holy and feast days and adjusting them to fit within the calendar. All too often religious ideas interfered with the clear scientific concept of the calendar itself, so that the calendar became enmeshed with countless religious beliefs, superstitions, traditions and customs in the vari-

ous nations of the world. Religious sectarianism entered into the making of the calendar.

Most ancient calendars were based on the moon with the month the important time-unit. Among these early moon calendars were those of the Babylonians and Chaldeans. The years had twelve months with an occasionally inserted thirteenth month considered as an "evil time." Months had 28 days of four weeks. The four phases of the moon had each about seven days which gave rise to periods of seven days, and the days were named after the then known seven planets. Each day and even the hours were supposed to be influenced by their particular planets which gave rise to superstitions and taboos. The scientific aspect became secondary in a maze of astrological practices and forecasts.

The Israelite calendar was also lunar, but the seven days were considered days of Creation with the seventh day, the Sabbath, devoted to worship, prayer and rest. The week had a religious connotation far removed from the Babylonian series of seven days with their astrological influence. In further stages of the calendar, the beginning of the year was changed from the spring season to the autumn season; an earlier pentecontad calendar of seven weeks with seven Sabbaths augmented by the closing fiftieth day (as a special offering to the Lord) was discarded; a new theory of the "unbroken continuity of the seven-day week" was established by religious leaders during the Babylonian captivity. From a strictly lunar calendar it gradually evolved into a luni-solar calendar. Thus we observe that the Israelite calendar has not been a static system but was frequent-

ly changed to meet later requirements of the people or their rabbis.

This opinion is confirmed in an article, "Israel's Calendar Confusions," wherein the writer closes with these words: "Acceptance of The World Calendar may entail some changes; but even the exponents of the Conservative Jewish religious tradition know that Jewish time-reckoning systems have changed in the past and are again changing today in independent Israel."

Most famous of all ancient calendars is perhaps that of the Egyptians. Their priestly astronomers and mathematicians, after scanning the celestial bodies and forecasting the inundation of the Nile, discovered that the seasons were dependent upon the sun and thus the sun was a more vital influence than the moon. The moon as the time-keeper was discarded and the sun became the central unit of the calendar. Twelve months of 30 days each constituted a year of 360 days at the end of which five days were added and placed under the authority of the priesthood. By this method the calendar was kept in step with the seasons. The many holy and feast days were also under the jurisdiction of the priests.

The earliest Roman calendar was so confused and complicated by priestly interference that it was completely impractical. Julius Caesar arranged the calendar on a more scientific and orderly basis, taking as a pattern the Egyptian solar calendar. He eliminated the moon calendar with its arbitrary insertion of a thirteenth month and distributed the five days of the Egyptian solar calendar more evenly throughout the year. He introduced the leap year day every four years, a device by which the calendar would

conform more nearly to the seasons. Leap year day was an inserted day similarly as was the more ancient fiftieth day in the Israelite pentecontad calendar. But here also as with previous calendars the priesthood wielded its influence.

The Moslems use a strictly lunar calendar not adjusted to the seasons so that months wander throughout the year until after 33 years they return to their original starting point, then to resume their wanderings. The religious character entered in with the Hegira of the Prophet Mohammed, from which event the Moslem calendar is dated 622 A.D. Their twelve-month calendar is justified in the Koran: "Twelve months is the number of months with God, according to God's book, since the day when He created the Heavens and the Earth."

The Christian calendar had its beginning with Constantine the Great, the first Western ruler converted to Christianity. The basis of this calendar was still the Julian upon which was grafted the seven-day week used by the Jews. The day of worship was changed to the first day of the week, Sunday, so as to commemorate the Resurrection of the Lord—on the first day of the week. . . .

Opposition to calendar reform in a proposition that is astronomical and mathematical comes from the interference of certain religious groups. They fail to understand the universal and scientific character of the calendar and that it belongs to all nations, peoples and races. It does not deal with religious belief, dogma, theology, tradition, myth or orthodoxy. Therefore a tradition formulated in the time of the Babylonian captivity should not be made a reason for unreasonable adherence by Orthodox

Jewry to their theory of the unbroken continuity of the seven-day week.

A Seventh-Day Adventist minister recently said that history all too often recorded that in hindering progress "zealous religionists prevailed upon the authority of the state to enforce their convictions." Surely in a scientific and astronomical matter civil authority should not be hampered by self-centered sectarian points of view.

To certain religious sectarianists opposing The World Calendar because of the new world holidays I pose three questions: First, are we not told that the Sabbath was made for the benefit of man and not for his enslavement? Second, scientifically the international date line requires a six or eight day week when crossing it, depending upon the direction. Does not this cause a broken continuity of the seven-day week? Third, for Christians and Jews the Fourth Commandment clearly reads that six days of the week are for labor and one day for rest. But in the accelerated and intensified age in which we live, the six days of labor have been reduced to five with one day for relaxation and another day for worship, praise, prayer and rest. Why is the opposition reconciled to this accepted change while adhering to a tradition not recognized by most Christians and Moslems, Hindus and Buddhists?

I wish to restate again firmly and unequivocally The World Calendar is global, does not deal with any form of religious differences and is not subject to any religious group. It includes and serves all religions, all races, all nations, all peoples and all professions and activities of life. The World Calendar is a servant of Time as Time is a servant of the Creator.

In considering this we might well contemplate the words of Gamaliel when he warned the opposition: "Refrain from these men, and let them alone: for if this counsel or this work be of men, it will come to nought: But if it be of God, ye cannot overthrow it; lest haply ye be found even to fight against God. And to him they agreed."

Recalling that in the past, Moses was opposed by his people only to have the Decalogue become the moral code for civilization, Ptolemy Euergetes of Egypt was opposed only to have his idea of an extra day for the "Good-doing Gods" adopted by Julius Caesar several centuries later, Copernicus' and Galileo's scientific concepts were opposed only to have them universally accepted, and Standard Time with its international date line was opposed as interfering with "God's time" only to be accepted as the world's clock time, so too The World Calendar is opposed but will yet be accepted with its universal world holidays. The new calendar rises above politics, prejudice, superstition, nationalism and sectarianism. Firmly it stands, foursquare on its own.

The World Calendar is achieving a close and harmonious relationship among the various time-units in an admirable and just manner. The different holy and feast days, observed by the many different groups of religion, fit easily and smoothly within it. No preference is shown any one particular religious group, they are all dealt with impartially. The Christian still observes the first day Sunday, the Moslem may have his sixth day Friday, and the Jew and Seventh-Day Adventist their seventh day Saturday.

Of outstanding moral and ethical sig-

nificance are the two new world holidays; the annual World'sday, to be universally observed at the close of every year (similarly as the closing fiftieth day in the ancient Pentecontad calendar) and the quadrennial Leapyear Day (introduced by Julius Caesar) at the end of the second quarter in the middle of leap years, maintaining a nice balance between the two half years. Both these world holidays are considered non-working days.

Thus in The World Calendar the last 365th day is annually honored by all peoples on earth with a new world holiday that completes every year. Then each new year begins with Sunday, a day of praise, prayer and worship, whereby the activities of each year begin regularly with Monday 2 January. The psychological influence of the *new* closing and the *new* beginning of the year is still not understood, but I believe its significance will be recognized and more fully appreciated as the years roll on.

The World Calendar is free from all religious sectarianism which too often in the past has confused and divided the people in their time-system.

A significant mathematical plan is explained in the last book of the Bible. The holy city of Jerusalem is portrayed as foursquare, with each of the four sides having three gates and each side facing the four cardinal points of the compass which in breadth, length and height are equal. Mention is then made of the tree of life bearing and giving twelve kinds of fruit and yielding its fruit each month, the leaves for the "healing" of nations.

Comparing this mathematical pattern with the civil World Calendar one cannot fail to be impressed with the close similarity. The "healing leaves" of nations

are symbolic of the annually recurring World'sday which in its world-wide observance would unite all peoples. "Can it be that The World Calendar is a fulfillment of an ancient prophecy?"

Not only does the revision of the twelve-month calendar follow the laws of nature, conforming to the four seasons and the length of the year but it obeys the cosmic laws of harmony, equality, balance and order. Harmony is innate in all the various time-units, equal and just consideration is given each without preference, balance is maintained between the equal quarters and half years, and a rhythmic order pervades the entire calendar.

When the scientific and moral aspects of the new civil calendar and the deep meaning and far-reaching influence of the world holidays are recognized and understood, I believe sectarian opposition will disappear. The World Calendar will be accepted on its practical, utilitarian, beneficial and ethical merits. A wholesome balance is established between the material and the spiritual.

Abbé Chauve-Bertrand, a French priest and a foremost European calendar authority, wrote: "Everything living develops and changes; we must be continually abandoning something of the past in exchange for something better in the future; the most ancient and venerable of traditional institutions must themselves be modified from time to time; and *more than once people have regretted that reforms did not come about when they were first desired.*"

An eminent scientist, Professor Martin P. Nilsson, in "Primitive Time-reckoning" published in 1920, draws the conclusion that the calendar "must be emancipated from religious cult."

Adoption of the solar calendar by the Egyptians in 4236 B.C., forerunner of the present Gregorian, is given high praise as "the earliest dated intellectual event in human history." And this is an era that we are too prone to describe as pagan and primitive!

Like the Egyptian solar calendar the acceptance of The World Calendar will be looked upon as one of man's outstanding achievements, a signal event of human endeavor promulgated when conditions were confused, uncertain, and humanity everywhere laboring under terrific economic, physical and mental stress and strain.

The United Nations, before which the calendar is under consideration, is the one established organization to deal effectively with the revision of the calendar on an international basis. Were this body to recognize The World Calendar as based on astronomical law yet imbued with moral-ethical qualities; regard it as a civil matter, unrelated to this or that religious dogma and tradition; deal with it from the universal and impersonal standpoints; approve it for world use; there would result far-reaching and lasting benefits for the common good of mankind. Such an act would impress itself upon civilization for countless years and would justify the ideals and hopes of the men and women who fostered this worldwide and much-needed international organization. *One World Calendar for One World* would go far toward creating greater unity, cooperation and good will.

Civilization urgently needs this new time-plan for the new age upon which we are entering. Its adoption is essential to world progress and man's development,

making possible new discoveries and inventions as undreamed of as were the radio and airplane by the advocates of Standard Time. Vast possibilities stretch out before us with the daily use of the orderly and perpetual World Calendar.

The touchstone of the present era is unity and a search for peace. We have come quite a way in breaking down the barriers of nationalism. What is more fitting then, than to eliminate religious sectarianism from our time-system and adopt The World Calendar as a means to establish a system by which the entire population on Earth can function and live more easily and peacefully?

With all the persuasion of which I am capable, I ask *urgency of action* on the part of every member of The World Calendar Association, every individual and leader, governments, foreign ministers, the United Nations, international and national organizations and all other groups. *We must all press forward now* so that The World Calendar can be put into operation when both the old and the new calendars coincide on Sunday 1 January 1961.

Let us then without delay

"Make big plans; aim high in hope and work, remembering that a noble logical diagram once recorded will never die, but . . . will be a living thing, asserting itself with ever growing insistency."

Thus will The World Calendar stand an enduring monument to the greater progress and welfare of civilization, to the courage and wisdom of man, and to the glory of God—the Creator.

CURRENT PRESS COMMENT

Calendar Convenience

The Christian Science Monitor

TIME brings about many changes. Among them is the change of a calendar every year since last year's dates do not fit this year's weeks. The proposed World Calendar, now advocated in the United Nations Economic and Social Council by India, would end that by adopting a "perpetual" calendar that would stand unchanged year after year and still fit the astronomical cycle.

But it is not so easy to change calendar systems. In 730 A.D. the Venerable Bede, an Anglo-Saxon monk, discovered that the year under the Julian calendar was 11 minutes and 14 seconds too long, adding a day every 128 years. But, as the *World Almanac* casually remarks, "nothing was done about it for 800 years."

By that time, in 1582 when Pope Gregory decreed a new calendar, it was necessary to skip 10 days to get back in step with the sun. Though the Gregorian calendar now is in general use throughout Western nations and in extensive parts of the Orient, there have been and are many other calendars.

Among these are the Egyptian, Greek, Roman, Chinese, Jewish, Mohammedan, and the remarkably accurate Mayan calendar of nearly nine centuries ago in Central America. In fact, there are said to be some 14 calendars in use in India, which partly explains that nation's interest in calendar reform.

Advantages claimed for the uniform 12-month calendar were summarized recently by Miss Elisabeth Achelis, president of The World Calendar Association: "Businesses and professions would find their bookkeeping greatly facilitated. Scientists would find their reckonings standardized. Governments would find international affairs simplified."

Such calendar reform should hardly require 800 years.

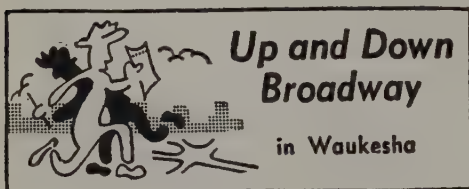
The Currency of Time

The Times, London

THE single-minded enthusiasts who have patiently campaigned over so many years for a revision of the Gregorian calendar have achieved a notable success by persuading the Economic and Social Council at Geneva to refer the question, by a unanimous vote, for study by the Governments of the world, with a view to its discussion at the nineteenth session of the council. The search for an ideal calendar is of immemorial antiquity. We have three natural measures of time—the apparent rotation of the sun and moon round the earth and the apparent annual motion of the sun among the fixed stars. We call these the day, the lunar month, and the year; and we have to face the fact that the three are incommensurable—that is, that none of them can be expressed as an exact multiple, or even an exact fraction, of either of the others. Hence every calendar must be an approximation.

Since the true year exceeds 365 days by about a quarter of a day, the Gregorian calendar preserves a conventional year of 365 days which, by inserting years of one day longer at intervals, according to a surprisingly simple rule, is kept in close accord with the movement of the heavenly bodies. But only leap years can be divided into equal halves consisting of complete days; and no year can be divided into thirds, quarters, tenths, or twelfths, or into exact weeks. The World Calendar proposal—the survivor of many, and the one that has found favor at Geneva—is mainly concerned to remedy this alleged defect. It cannot make twelve equal months, for a year of 360 or 372 days would be impossible; but it can divide a year of 364 days into four equal quarters of ninety-one days, and give to each quarter a uniform succession of three months, of thirty-one, thirty,

and thirty days respectively. But every year there will be at least one day over; and this it is proposed to place at the end of the year, included in no week . . . , and made a perpetual holiday and called "worlds-day." In leap years—which would be those of the Gregorian system—a second and similar day would be inserted at the midpoint. With these extra days left out of all reckoning, every year would be of exactly fifty-two weeks; and so the days of the week would recur on the same days of the month every year. Each month would have the same number of working days every year; any quarter could be directly compared with any other. . . .



Happy Worldsday to You

Waukesha (Wis.) Freeman

PERHAPS some of you have read or heard about plans to revise our out-dated calendar. The calendar we use these days, you know, is 2,000 years old. It was instituted by Julius Caesar and modified by Pope Gregory XIII. It gets its name from him: the Gregorian calendar.

It needs overhauling badly for many reasons. *Newsweek* magazine this week gives us the low-down in simple language.

There's a group called The World Calendar Association, International, which is a 24-year-old organization and the foremost World Calendar crusader.

Their idea is to add a Worldsday every year after 30 December. In the new calendar each year will end with a Saturday, followed by a Worldsday, followed by a Sunday. In leap year another Worldsday would follow 30 June.

We're all for it. Holidays would fall on the same day each year, and each Worldsday, of course, would be a holiday, too. . . .

How about it? *Tom and Gene*

Australian Comment

Morning Herald, Sydney, New South Wales

HOLIDAYS and anniversaries that will always fall on the same weekday each year, and a perpetual calendar which does not change from year to year—these are objectives of The World Calendar Association. Leading the demand for changes in the existing calendar are Dr. Albert Caquot of France, an internationally-known engineer, and Miss Elisabeth Achelis, founder and President of The World Calendar Association.

Both feel that our present calendar is "so eccentric that it makes statistical comparison of time periods inexact and complicated." Their proposals for reform would go hand in hand with United Nations efforts to preserve world order.

Defects of the present calendar are survivals from ancient compromises and superstitions. The new system would benefit many fields of endeavor, including transportation, industry, education, religion, home, government and labor. Every business can simplify its accounting and programming. . . .

Revision Long Overdue

Hunter's Bulletin, Milbank, S. Dak.

ANY man in business has had occasion to become irritated by the capricious variations of our present-day calendar. But from habit and long familiarity, many of us regard the inconveniences it creates as a necessary evil—something to be tolerated like the weather.

A growing segment of our population, however, is beginning to realize that calendar reform is a sensible thing which ought to be accomplished, and quite soon too.

It needs to be said that the Gregorian calendar, although now adopted by most Western nations, is by no means universal; in fact, it is used by only about half the world's population. The rest measure their time by such ancient systems as the Coptic, Chinese, Moslem, Persian and Jewish calendars. A universal plan—simple, perpetual and rational—is long overdue.

EXCERPTS AND REVIEWS

Profile of Astronomer Royal

(*The New Yorker*)

SIR Harold Spencer Jones, the Astronomer Royal of the United Kingdom, is a huge man of sixty-three, with a granitelike, handsome countenance, bushy eyebrows, and a lofty forehead. He flew over here recently at the invitation of The World Calendar Association to talk on "Is There a Need for Calendar Revision?" at the Hayden Planetarium. We had a cup of coffee with him at the Chatham, where he was staying.

"I'm for Miss Achelis," Sir Harold said, referring to Miss Elisabeth Achelis, president of The World Calendar Association, which recommends four identical quarters of one 31-day month and two 30-day months, plus a 365th day in ordinary years, and 365th and 366th days in leap years. The present, or Gregorian, calendar, Sir Harold said, makes the year 26 seconds too long, causing the seasons to drift backward one day every 3,323 years.

We requested Sir Harold to drift backward over his life, and he gazed at us for a full ten seconds before replying. "I am the tenth Astronomer Royal in 278 years," he said in low, measured tones. "The appointment is made by the Prime Minister, and the Astronomer Royal is an employee of the Admiralty. He is the director of the Royal Greenwich Observatory, which sets the time for the world. There was a difference between the Paris Observatory, which is older, and Greenwich in the early days. Greenwich was founded to obtain information on the sun and the moon and the planets, in order to improve knowledge about their positions and motions to assist in navigation. Many ships were lost in those days."

Sir Harold paused and stared at us again. "Whereas Paris?" we asked.

"Whereas Paris worked just at the whim of a particular director," he said. "No continuity. That's why the meridian that passes through Greenwich was the only one seriously considered when your State Department called a conference in Washington in 1884 to determine from what meridian geographers all over the world should reckon longitude. However, since 1948 we've been moving the observatory from Greenwich to the Castle of Herstmonceux, in Sussex, sixty miles outside London. The move will be completed in 1956. We are moving because of the smog in London and because light conditions at night there are bad. Too many neon signs. Herstmonceux dates from 1440; the government modernized it for us. I live in part of it. It's not one of those grim castles. The rooms are light and airy. It's the earliest large brick building—rose-pink brick—in England. We now compute time there, so Greenwich time is being figured one minute and 20 seconds away from the meridian."

Sir Harold, who has headed the Greenwich Observatory since 1933 and was knighted in 1943, was born in London, the son of an accountant. He was an outstanding student of mathematics and physical optics at Cambridge, and between 1923 and 1933 he was His Majesty's Astronomer at the Royal Observatory in Cape Town. "That observatory was founded in 1820," he said. "Greenwich can't observe the whole sky—just the Northern Hemisphere. The Cape takes care of the Southern Hemisphere. A new star was discovered in a rather interesting way while I was down there. I've forgotten what the man's name was. He was a postal employee. Going home in the early hours of the morning in 1925, he looked at the sky and didn't recognize that chap up there. Something looked wrong. He did the proper thing. He sent a tele-

gram to the Cape Observatory. We got a spectrum of the star that very night, while it was increasing in brightness. It showed that stars expand enormously when they flare up. We called it Nova Pictoris 1925. It can still be observed—faintly."

We asked the Astronomer Royal what time it was. He consulted a wristwatch, which agreed with ours. "I haven't brought my best watch," he said. "This is my second-best. My good watch is on British time, and I don't want to change it to local time. It always astonishes me—the precision with which a commercial watch can record 86,400 seconds in a day. A really good watch can keep within 30 seconds of correct time a couple of years on end. When I first worked as Chief Assistant at Greenwich—I succeeded Sir Arthur Eddington in that post in 1913—we used a pendulum clock whose smallest measurement was a tenth of a second. Now we use the quartz clock, which divides seconds into one-hundred-thousandths. Research on an atomic clock is being carried on."

Holiday Chant

(*Fortune Magazine*)

IF human cussedness is not enough to create collective-bargaining difficulties, the Gregorian calendar is now adding trouble to labor negotiations. Christmas Day, 1954, and New Year's Day, 1955, fall on successive Saturdays. In the following year Christmas, 1955, and New Year's, 1956, fall on successive Sundays.

The unions want the holidays. Management argues that the function of holiday pay is to reimburse the worker for wages lost on a day he didn't work; but the unions say that if the contract stipulates seven paid holidays yearly, they want seven paid holidays, regardless of the calendar.

Some firms will observe the preceding Friday as a paid holiday, others the following Monday. Some are substituting another day of the year as a holiday; some are just giving an extra day's pay with no day off.

Time for a Change

(*Advertiser, New Canaan, Conn.*)

BEFORE the United Nations is a proposal for calendar reform that many persons and interests look upon favorably. Obviously the time must come when a more orderly calendar organization is adopted. The Gregorian calendar is at best a relic of the middle ages. Its lunar months and solar seasons are out of whack. Adoption of The World Calendar would erase much confusion.

Some objection arises from religious sources to the proposed universal calendar reform, but much of this opposition is being overcome. The advantages would be self-evident. Shopkeepers and business of all kinds would benefit. It would save millions of dollars in industrial enterprise that could be planned more regularly and thus get fuller production. As for the general public, a wait of 2,000 years is long enough to wait for a needed change in something as important as the measure of time, now hopelessly muddled, by which we live from day to day.

Passing the Time

By RAMON COFFIN

(*In Buffalo, N. Y., News*)

TO a large degree, the affairs of people are directed by "passing time." What would happen if we lost all our clocks and calendars?

If we lived on a far island, life might drift along well enough without the marking of time. We could go to bed when we grew tired, in the morning we could get up when we chose, without any jangling alarm clock.

In the workaday world, however, we need watches, clocks and calendars. We go to school or start to work at a fixed time. Trains, buses and airplanes have schedules. We need calendars for records of history, as well as for other purposes.

Egypt seems to have been the country where the 12-month yearly calendar was invented.

New Harmony in the Calendar?

JANUARY
APRIL
JULY
OCTOBER

FEBRUARY
MAY
AUGUST
NOVEMBER

MARCH
JUNE
SEPTEMBER
DECEMBER



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NEWSWEEK—ARTHUR LUBELL

Calendar Change?

(Newsweek, 16 August 1954)

AS life becomes an ever-tighter complex of train and airplane timetables, court calendars, statistical studies, and interest calculations, the strain on the old Gregorian calendar grows more noticeable. For the last 50 years groups of citizens, dedicated to their mission, have tried to interest the world's governments in sweeping plans for calendar revision. By last week they had a major indication of progress. At Geneva, the Economic and Social Council of the United Nations voted unanimously to present a proposed World Calendar to some 90 member and non-member governments. With it goes a request to submit their views on reform early next year.

'Wandering Weekday': The present calendar is 2,000 years old. Instituted by Julius Caesar and modified by Pope Gregory XIII, from whom it gets its name, the Gregorian calendar has two major defects: The "wandering weekday" and irregular months and quarters. The 365th day of the year adds one day to what would otherwise be an even 52-week year; therefore, one more weekday must be borrowed from the next

year. This moves each succeeding date one weekday later (two in leap year). Christmas is on Saturday this year, on Sunday in 1955, and on Tuesday in 1956. Days anchored to particular days of the week, like Easter, must be on different dates each year. Also, there are months of 31, 30, 29, and 28 days all falling in irregular order, starting on different days, and forming unequal quarters.

The proposed World Calendar (see picture) offers a more effective substitute. Its most striking innovation is Worldsdays. Designed to give wandering weekdays a permanent home, Worldsdays follows 30 December and has no assigned weekday. In the new calendar each year will end with a Saturday, followed by a Worldsdays, followed by a Sunday. In leap years another Worldsdays will follow 30 June.

The result is a quite harmonious pattern. Every year is the same, beginning on a Sunday and having a constant number of workdays. The quarters are identical, each having 91 days, thirteen weeks, and always beginning on Sunday. Each month has 26 weekdays, plus Sundays. Every date falls on the same day of the week every year.

The World Calendar Association, International, a 24-year-old group with chapters

or affiliates in 37 countries, is the principal World Calendar crusader. Its leaders, gratified by the U.N. decision, concede that the nations have plenty of time to make up their minds. The World Calendar, to begin smoothly, must be inaugurated on a year when the Gregorian calendar also starts on a Sunday. The first year to fill this bill is 1956. But the calendarists, with an eye on calendar publishers and almanac writers, have advanced their target date to the next one, 1961.

Let's Simplify Life

By LAURA Z. HOBSON
(*New York Journal American*)

I AM joining up with people all over the world who root for calendar reform. There hasn't been any since 1752, while we were still the Thirteen Colonies. That was 202 years ago, so don't call anybody restless or fickle who cries "It's time for a change!"

Most of the calendar reform people argue in terms of industry and commerce, of payroll records or quarterly interest and fiscal years. I prefer the housewife's arguments. Any housewife's arguments are simpler. She knows a house runs better by system than helter-skelter, and that if washday came on Monday one week, Tuesday the next and Friday some other, then nobody in the family would ever have a clean shirt or a pair of fresh socks on time. The same goes with her budgets and bills. So many dollars, say, for a month's food. But is that for 30 days, or 31, or 28? You can budget food by the week, of course, but what about your monthly gas and electricity and phone bills? Or the rent, or the installments on car or refrigerator?

How much simpler life would be—not only in business and banks, but right in your own home! When you wrote a letter, you'd never again have to open the garbage pail you just lined with newspaper to find out the correct date. Our present calendar is slap-happy. If any housewife ran things like that, her whole family and her in-laws would start telling her off, and never quit for a month of Sundays.

Why India Wants It

(*Register, Des Moines, Iowa*)

SINCE last fall, the government of India has been urging the United Nations to recommend adoption of The World Calendar in 1956. The matter is particularly pressing for India because most of its people still live by calendars even more archaic than the Gregorian. The popular Hindu calendars have got the religious festivals out of whack with the seasons, and the widespread practice of astrology and its superstitions is no longer in step with the stars and planets.

So India is planning to change calendars anyway, and since they've got to go through with the inconvenience of change, they'd like to go direct to a modern, universal, perpetual calendar, instead of to a 1582 revision of a basic 46 B.C. system.

The proposed calendar has many advantages, chiefly that it would make life simpler by doing away with the present irregularities and complications. The calendar has been changed before; therefore it is neither sacred nor inviolate. Certainly it needs some kind of betterment.

Days in Months

By E. P. HODGINS
(*Medicine Hat, Alberta*)

To find the days in any month
One needs some calculation:
From 28 to 31
They vary in duration.

With practice one can memorize
Each month which is a fixture,
But February varies with
An extra day in mixture.

In seven months we've 31 days,
In four we've one day fewer:
It's time we were considering
A calendar that's newer.

A calendar has been devised
Which wins full world approval
And its adoption soon will mean
The present one's removal.

Calendar Revision Debated at Geneva

By WAYNE GARD
(Dallas, Tex., News)

AT Geneva [in July] the nations are taking up again a subject that has been discussed for many centuries. This is the revision of our calendar. The United Nations has had this subject on its agenda since 1947. It was brought up again last year by India, whose people use fourteen different calendars.

Study of this problem by the Economic and Social Council of the United Nations has been spurred by a recent announcement at the Vatican. A newspaper there, *L'Osservatore Romano*, has said in a front-page article that the Catholic Church is preparing to collaborate with the United Nations in calendar reform. It is ready even to consider the establishing of a fixed date for Easter.

The Vatican article was written by the Rev. Daniel O'Connell, an Irish Jesuit who heads the Vatican Observatory. He made it plain that the Catholic Church is not opposed to calendar reform and wrote with apparent favor of the plan sponsored by India and The World Calendar Association.

Stabilized Birthdays

By J. HUGH BRUETT

(Astronomer, Oregon Higher Education System)

RECENTLY I was taking dinner with young friends who only a few weeks earlier had a new arrival in their family. Little Bobby had come to them on Thanksgiving Day, 26 November. The parents were sure his birthday would not come on Thanksgiving day every year.

Calculating ahead we were able to determine that he will celebrate his birthday and

Thanksgiving together only twice in the next 12 years—when he is 6 and 11 years old, but not in the years between.

According to The World Calendar, which many are trying to have adopted in all civilized countries, a certain day of any month would every year fall on the same weekday. But this system is not yet in effect.

If we eliminate leap years, our present year has 365 days. With 364 days to a year, we should have an even 52 weeks annually. But the 365 days divided by seven leaves a remainder of one day. This means that since 1 January 1953 (an ordinary year), came on Thursday, 30 December 1953, the end of 52 weeks, was Wednesday. Then 31 December 1953 was Thursday and New Year's Day, 1954, fell on Friday.

If all our years were ordinary years of 365 days, then on any date of one year, the day of the week would be advanced just one day over the year before. Thus, 1 January 1953, is Thursday; 1954, Friday; 1955, Saturday, etc.

But there are those vexing leap years when "unattached" men have to go into hiding for fear of being roped into "the holy bonds." These have two extra days over 52 weeks (thus prolonging the agony of the timid males); 15 June 1955 will fall on Wednesday; in 1956, a leap year, on Friday, or a jump of two days.

It is not difficult to calculate backwards or forwards for many years for the day of the week for any date between 1 March and 31 December. But since the extra day comes at the end of February, we must remember to treat January and February of leap years as ordinary years in our calculations and these months the next year as being in leap years. (In calculating backwards, remember that 1900, although divisible by four, was not a leap year).

For those who want to try their skill, let us suggest that they show from a 1954 calendar and the rules given above that 1 June 1953 came on Monday; 15 April 1951 on Sunday; 3 February 1948 on Tuesday; and 10 March 1943 on Wednesday.



CALENDAR REFORM

in a Nutshell

THE PRESENT CALENDAR

(like the world)

IS

confused
discordant
irregular
wasteful and shifting

WHEREIN

nothing fits
nothing agrees
nothing is stable

THE WORLD CALENDAR

(forecast of a better world)

IS

harmonious
ordered
regular
saving and perpetual

WHEREIN

everything fits
everything agrees
everything is stable

WHAT SHALL THE ACTION BE ?

STAND STILL

Let well enough alone
The people are content
Other more worth-while
things to do

GO FORWARD

Give something better
Improve the improvable
Conserve valuable time, the
stuff life is made of

TODAY

There are too many calendars
in the world

United Nations can give *one*
calendar to the world

WHAT SHALL HISTORY RECORD

?

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CANADA: The World Calendar Association, International, Affiliate, A. J. Hills, Chairman, Room 31, 102 Bank St., Ottawa.

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THE WORLD CALENDAR FOR ONE WORLD

After reading please pass on to others.

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26
44

Journal of
**CALENDAR
REFORM**

**Let's End Our Calendar Chaos
Your Opinion Counts
More Calendar Resolutions**

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PAN INDIAN OCEAN SCIENCE ASSOCIATION
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**As a Doctor Sees It
Farmers and The World Calendar**

December 1954

SCIENCE & INDUSTRY

OAKLAND

JAN 19 1955
PUBLIC LIBRARY

THE WORLD CALENDAR

1ST
QUARTER

JANUARY							FEBRUARY							MARCH						
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2ND
QUARTER

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3RD
QUARTER

JULY							AUGUST							SEPTEMBER						
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4TH
QUARTER

OCTOBER							NOVEMBER							DECEMBER						
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22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

W (Worldsday, a World Holiday) equals 31 December (365th day) and follows 30 December every year.

W (Leapyear Day, another World Holiday) equals 31 June and follows 30 June in leap years.

In this Improved Calendar:

- Every year is the same.
- The quarters are equal: each quarter has exactly 91 days, 13 weeks or 3 months; the four quarters are identical in form.
- Each month has 26 weekdays, plus Sundays.
- Each year begins on Sunday, 1 January; each working year begins on Monday, 2 January.
- Each quarter begins on Sunday, ends on Saturday.
- The calendar is stabilized and made perpetual by ending the year with a 365th day following 30 December each year. This additional day is dated "W," which equals 31 December, and called Worldsday, a year-end world holiday. Leap-year Day is similarly added at the end of the second quarter. It is likewise dated "W," which equals 31 June, and called Leapyear Day, another world holiday in leap years.

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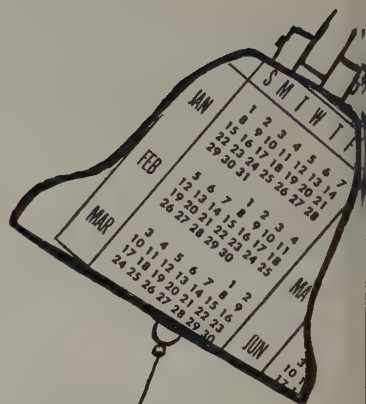
Clarence R. Decker, Editor

Linda Halsted, Associate Editor

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RING IN THE CONCORD
OF THE NEW!

NEW YEAR'S GREETINGS
ELISABETH ACHELIS
1955



THE
WORLD
CALENDAR
ASSOCIATION
INTERNATIONAL



THE WORLD CALENDAR FOR ONE WORLD

VOL. XXIV

DECEMBER 1954

No. 4

Editorial

The Year of Decision

ATENDING the ninth anniversary celebration of the founding of the United Nations, Sunday 24 October, I was again impressed with the many constructive activities of this world-wide organization. Its work in the social, educational and technical fields to better conditions throughout the world, particularly in the more underdeveloped areas, is cause for pride and satisfaction.

Inevitably I thought of next year—1955—when the United Nations will complete its first decade of service. At this auspicious milestone, a unique and enduring contribution to our ever-changing and growing world would be the adoption of the current proposal to study the question of calendar revision with the view of adopting a revised and improved calendar for all nations and all peoples.

Dag Hammarskjöld, Secretary-General of the United Nations, in October requested the members and non-members of the United Nations to “study the problem” and to “furnish their views some time in early 1955” (see pages 168-9 of this issue of the *Journal*). The request was the result of the unanimous approval of the resolution of the Indian Government last July by the Economic and Social Council. Another unanimous agreement, at the resumed 19th session of ECOSOC in May 1955, to review the entire matter of calendar revision would be logical and cause for assurance. Thus, in the evolution of the calendar, 1955 may well be the year of decision.

Centuries ago the Egyptians made an historical contribution to civilization when they replaced the primitive moon calendar with the scientific sun calendar, a change that was really revolutionary in its significance. The proposed calendar revision now



Miss Elisabeth Achelis, founder and President of The World Calendar Association, thanking Mme. Vijayalakshmi Pandit, retiring President of the General Assembly of the United Nations, for the resolution favoring The World Calendar introduced by her country and unanimously approved by ECOSOC on 28 July 1954.

before the United Nations is a mild evolution compared with the Egyptian reform, but its contribution to Time and its reckoning is no less significant. With the world made up of many peoples, The World Calendar with its universal plan and purpose will serve all groups alike, helping them in their many and varied activities. Significant benefits resulted from the establishment of Standard Time. Even vaster advantages and greater benefits will flow from the use of a calendar that is stable, harmonious and orderly.

The governments of the world are now actively deliberating on the wisdom of undertaking a comprehensive and thorough study of calendar reform through the United Nations. At such a time it is incumbent upon all organizations, associations and individuals to

express their views to their representatives, to the heads of their respective governments, and to the Secretary-General of the United Nations.

It behooves all of us as citizens of the world—East and West, North and South—to speak, write and work for calendar reform. A united and urgent public opinion will speed the calendar to its much desired goal.

"There is one thing stronger than all the armies of the world, and that is an idea whose time has come."

THE IDEA IS HERE, THE TIME IS NOW!

Elisabeth Achelis

Now we can actually do something about it

LET'S END OUR CALENDAR CHAOS

By Lacy Donnell

Reprinted from the original article in the Saturday Review (18 December 1954) and the condensed version in the Reader's Digest (January 1955)

FOR MORE than a century business leaders, churchmen, and scientists have been trying to do something about our calendar—which is sadly out-of-date. Twenty years ago, when Harry Truman was an unknown freshman Senator, he dashed off a letter saying he favored revising the calendar but wasn't going to give it any serious thought "because it would take a Pope Gregory the Great or a Julius Caesar to put these changes into effect." Now, because of a simple step taken by the U.N.'s Economic and Social Council, we the people for the first time in history have a practical opportunity to pitch in and end the chaos in our calendar.

Last summer the eighteen nations on the Council unanimously adopted a resolution asking all Governments, whether U.N. members or not, to study the problem of calendar reform and present their views by May 1955. So, in every country where the voice of the people counts the coming months are decisive. Every Government must stand up and be counted, and every citizen can bring his weight, and the weight of his industry, business, profession, clubs, and associations to

bear upon his Government. If enough Governments favor a new calendar the Council will probably turn to the General Assembly, which can then draw up an international convention to be submitted for ratification by the various Governments.

The calendar everyone is talking about is the twelve-month, equal-quarter plan called The World Calendar. In this proposed calendar every year is exactly the same; 1 January is always a Sunday. Each month has twenty-six weekdays plus Sundays. January, April, July, and October, the first months of each quarter, have thirty-one days; the other months thirty. The calendar is stabilized by ending the year with a 365th day which follows 30 December and is dated W, or World day, a world holiday. (Leap-Year Day is similarly added after 30 June every fourth year, and becomes another world holiday.)

With such a streamlined calendar, department stores would know, for example, that every December has five Saturdays and that four of them always come before Christmas. Household budgeting would be easier, since each month has

the same number of weekdays. Homes, schools, social life would run more smoothly. And the new calendar would make it easier to shift other holidays so a dozen long week-ends a year would be possible.

The World Calendar is a workable synthesis of many proposals. Its key feature reaches back to 1834 when an Italian priest, Abate Marco Mastrofini, was struggling with the puzzle of how to fit weeks, months, quarters, and half-years into a year of 365 days. Since 365 is divisible only by five, the puzzle had stumped the experts. But Mastrofini hit upon an ingenious solution: take the 365th day out of its weekday sequence, treat it as an extra holiday without a weekday name, and thus obtain, in effect, a year of 364 days, which can be divided evenly into fifty-two weeks. By the simple device of having one "blank" day any date of a given month will fall on the same day of the week every year.

Half a century later, when the Astronomical Society of France conducted a calendar improvement contest, the first prize was won by an astronomer, Gustav Armelin, who adopted Mastrofini's blank day. Armelin's plan made the quarters all equal, each three months having a first month of thirty-one days followed by two months of thirty days each. The decades brought such refinements as making Leap-Year Day another "blank" day, and starting the year on Sunday. One of the virtues of this calendar is that it avoids tricky artificialities such as the ten-day week and three-week month adopted by the French Revolutionists back in 1789, and the five-day week, which Soviet Russia tried and discarded.

The first important businessmen's sup-

port of a new calendar came in 1910—from the International Chamber of Commerce. This agency repeatedly urged calendar reform. It definitely determined that the Vatican had no objection, then persuaded the Swiss Government to begin a study with the view of calling a world conference. But World War I intervened. After the Armistice Cardinal Mercier, Belgium's magnificent symbol of freedom, began advocating a new calendar, and in 1923 the subject was taken up by the League of Nations.

The League examined more than 180 different calendar plans. One split the year into seventy-three weeks of five days each: to be called Ano, Beno, Ceno, Dene, and Eno. Another had ten-day weeks. One had twenty months, with some weeks six days long, others seven. One proposed nine forty-day months, with five "blank" days at the end of the year. Another abolished months and numbered the days consecutively, one to 365. Another shortened the year to 364 days, allowing the dropped days and the Leap Year Days to accumulate until, every twenty-two years, there were enough for a Leap Month.

The League narrowed everything down to two plans: the twelve-month, equal-quarter World Calendar, and a thirteen-month scheme pushed by George Eastman's ample finances. (The extra month, called Sol, was to be inserted between June and July.) But this thirteen-month plan was soon out of the running; it was remembered chiefly because of a bizarre feature: every month had a Friday the Thirteenth. In 1937, when fourteen nations voted for the twelve-month World Calendar, the thirteen-month scheme didn't get one vote.

The big news today is that pivotal India has taken the lead in calendar reform. Back in 1931 Mahatma Gandhi squatted on the floor of a London room with a handsome, shy, blue-eyed American who has devoted a quarter century of her life and a substantial slice of her fortune to The World Calendar. Elisabeth Achelis, often called "the calendar lady," explained it to Gandhi, who subsequently urged world adoption of the new calendar. Nevertheless, in the 1937 League poll India was one of six countries voting against The World Calendar. After India got her independence, however, attitudes began to change.

In 1952 Prime Minister Nehru named a calendar reform committee, and early in 1953 he publicly stated that today's calendar, introduced by Caesar in 45 B.C., and readjusted by Pope Gregory in 1582, "has defects which make it unsatisfactory for universal use." Then in the fall of 1953 the Government of India proposed to the U.N. the adoption of The World Calendar. India officially stated this reform would overcome the "drawbacks of the present Gregorian Calendar. It is scientific, uniform, stable, and perpetual. It offers harmony and order to all strata of society—government, finance, industry, labor, retail trade, administration of justice, home life, transportation, and education."

India's first move was to get calendar reform on the agenda of the Economic and Social Council. Three years earlier the United States and the United Kingdom had blocked little Panama's attempt to get calendar reform on a U.N. agenda. But when the two tried to block India's move they were impressively outvoted, twelve to two.



Another highly important development: major powers are now lining up behind the new calendar. When the League took its poll fourteen nations approved the new calendar, but not one of them was a major power. When Panama tried to get calendar reform considered in 1949 no major power gave support. But in 1953 the move for a new calendar was not only led by India but supported by such powers as France, Egypt, and Uruguay. And at the Geneva meeting last July Soviet Russia, which formerly had abstained, moved into the new calendar camp. According to the official U.N. records, the Soviet delegate made a statement to the effect that the USSR delegation was in favor of the proposed calendar reform.

Soviet Russia's support was particularly significant since only a month before the meeting the Roman Catholic Church had made known that it was willing to collaborate with the United Nations in calendar reform. In a front-page article in the Vatican newspaper, *L'Osservatore Romano*, the Reverend Daniel J. K. O'Connell, director of the Vatican Observatory, explained that the plan for The World Calendar was devised by a Catholic priest, and stated that "the Church has no reason to oppose in principle a modification of the present calendar." Father O'Connell said further that such faulty features as months with odd lengths, quarters varying from ninety to ninety-two days, and a second half of the year three days longer than the first, were not put in our calendar by Pope Gregory but were "inherited from Pagan Rome."

Most Protestant denominations have taken a similar position. A few have en-

dorsed The World Calendar outright. Some opposition still comes from extremely orthodox groups, Jewish and Protestant, on the grounds that a "blank" day would cause more than six days to intervene between some Sabbaths. However, the official United Nations document prepared by Secretary General Trygve Lie states that "this disadvantage affects only a very small part of the population of the world."

The main obstacle is apathy. Many people don't realize how much our chaotic calendar is costing them. On learning the facts they usually become new-calendar boosters. For instance, Hilding Törnebohm, manufacturing head of Sweden's SKF Industries, reports that shortly before he was elected president of the International Organization for Standardization (of weights and measures) in 1952 he heard about The World Calendar and thought it his duty to study calendars. After investigation he concluded that business planning was crippled by calendar irregularities. "A businessman," he says, "wants to estimate the probable consumption of a certain article of merchandise within an approaching period of time; a railroad wants to estimate the volume of traffic for the next month or quarter; a community administration wants to chart the expected variations in the demand for electricity, gas, or water. All endeavor to solve their problems by means of comparisons with corresponding periods in preceding years. But accurate conclusions cannot be reached unless the periods are precisely comparable. Under the present calendar this is well-nigh impossible without costly and time-consuming adjustments."

Big business tried to meet this with costly research. Small business can't afford it. In either case, the consumer pays the extra bill. President Norman Call of the Richmond, Fredericksburg, and Potomac Railroad tells me that the new calendar would facilitate railroad operations, cut costs, thereby help economic progress. Railroad forecasts, estimates, and plans lean heavily on past and current records. Many railroad men say a stable calendar would aid in anticipating the make-up of trains and planning the allocation of rolling stock. Moreover, according to an engineering consultant who made a special railroad investigation, a stable calendar would simplify railroad schedules by synchronizing weekdays and month-dates.

Years ago the new calendar was endorsed by *Traffic World*, the bible of many railroad men. In Canada, which led the whole continent in establishing Standard Time, it has been endorsed by the Canadian Railway Association, as well as by both the Canadian Manufacturers Association and labor organizations representing over 83 per cent of the nation's organized labor. The French railroads officially declared for a new calendar thirty years ago.

Arthur Kaufmann, executive head of Gimbel Brothers in Philadelphia, says The World Calendar would simplify and unify the operation of department stores throughout the world. "It would tend to make our planning more intelligent, which would ultimately result in expense savings and lower prices." Under the new calendar, for example, all Januaries would be alike. At present we have seven kinds of Januaries, fourteen kinds of Februaries, and seven kinds each of all the

other months. How can a department store accurately compare its sales, say, in December 1954, which had four Saturdays, with sales in December 1955, which has five Saturdays? Department-store officials know the comparisons can't be precise. So some even resort to "internal calendars," which ignore the months and split the year into thirteen four-week periods. A stable calendar, according to E. C. Stephenson, vice-president of J. L. Hudson in Detroit, the nation's second largest department store, would ultimately bring "lower costs of living for everyone."

These are not isolated voices. The World Calendar has been endorsed by such organizations as the American Institute of Accountants, Canadian Retail Federation, British Empire Federation of Chambers of Commerce, the Mexican Hotel Association, the New South Wales Retail Traders Association, the Austrian Board of Trade, and both the Tokyo and Osaka chambers of commerce. Endorsements have come from such eminent groups as the American Association for the Advancement of Science, and over the years from businessmen of the caliber of Gerard Swope, George F. Baker, Gano Dunn, A. P. Giannini, and Myron C. Taylor.

Recently I talked with the chairman of the board of an insurance company, the vice president of a manufacturing concern, and Cleveland E. Dodge, president of Phelps Dodge Corporation, the copper firm. All thought The World Calendar would bring real advantages to workers as well as industry. The Indian Government stated: "Government planning programs, acts of Parliament, and official records would be more easily ar-

ranged; tax assessments for millions of weekly wage-earners would be facilitated; law courts, schools, and academic institutions would be able to fix their terms on regular dates."

Sir Harold Spencer Jones, the Astronomer Royal who heads England's Greenwich Observatory, on one occasion asked: "How many of my audience can say at once how many days there are in a particular month that I might name and how many, on the other hand, could give an answer only after repeating the doggerel, 'Thirty days hath September'?" With *The World Calendar* no nursery rhyme will be needed. Everyone will be as familiar with the calendar as with the clock dial.

Also, Monday's child, "fair of face," will always celebrate her birthday on Monday; Tuesday's "full of grace," on Tuesday, and so on. True, birthdays will be lost by persons of our present generation who were born on 31 March, 31 May, or 31 August—actually, the change would affect only eight in each 1,000 population. Individuals born on 31 December will be able to celebrate on *Worldsday*, and those born on 29 February will now have a birthday every year.

Despite the impressive backing received over the years from all parts of the world, the new calendar needs help right now. In urging action, India most honestly disclaimed that it was "a matter of life and death." But plainly a stable, orderly calendar would smooth many affairs in all nations.

The attitude of the American and

British foreign departments to date has been negative. But there is one fortunate aspect: both of these Governments are highly responsive to public opinion. In the United States a do-nothing policy, formulated under the Democrats, has simply been continued under Secretary Dulles. Three years ago our State Department announced that "while proposals for calendar reform have many merits, it would be extremely difficult to put such projects into effect until mass popular support within the United States has been demonstrated." It said Congress would have to take the lead before the State Department could feel "it had a mandate."

Presumably that is still State Department policy. But public pressure can change it. Individual letters to Secretary Dulles and members of Congress will help. More important, individuals can line up support of local, state, and national organizations. They all can ask Secretary Dulles to support calendar reform next May. Then, if the U.N. adopts a convention setting up a new calendar Congress will have its chance to ratify it.

Most international problems today are so complicated, and their solution so dependent upon technical and even secret data, that many everyday citizens feel they cannot competently give advice. But calendar reform is out in the open. There are no classified documents. Intelligent farmers, workers, housewives, business and professional men and women can speak on it authoritatively. If we do this, and do it quickly, we can end the chaos in our calendar.

YOUR OPINION COUNTS

The following excerpts from the new brochure, Your Opinion Counts (Department of State Publication 5606, November 1954), are reprinted here both for their general importance and for their specific applicability to the question of calendar revision.

In accordance with the Department of State's desire to stimulate greater participation by individuals and organizations in an exchange of views and information with the Department, it is the hope of The World Calendar Association that all Americans interested in the calendar will express their views to Secretary of State John Foster Dulles.

The governments of other countries undoubtedly would likewise welcome the expression of opinion from their citizens.

FROM time to time most of us hear someone say: *What the American people think about foreign policy doesn't count with those fellows in the State Department. They go right ahead regardless. Or: What I think doesn't matter. If I did sit down and write a letter to Washington, what good would it do? Who would bother to read it—let alone answer it? . . .* The relation of public opinion to policy-making has been described in this manner: 'We have to know what the American people think. In a democracy no government agency can possibly function effectively if it cannot hear the voice of the people' . . .

"Any letter you write to the Department of State is read . . .

"The individual who joins an organization interested in foreign policy can be sure that the views of this organization will receive careful attention in the State Department. . . .

"Your opinion counts even if you neglect to express it, because, in failing to say what you think, you lessen the likelihood of the course you favor being adopted and pursued. Too often it happens that those who endorse a policy merely nod to themselves, while those who oppose it raise their voices.

"At all times your opinion counts—but it counts for *more* if you register it."

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THE SECRETARY-GENERAL'S LETTER

Official text of transmittal letter to Secretaries of State or corresponding officials, requesting "views of governments of States Members and non members of the United Nations, on the desirability of calendar reform."

7 October 1954

The Secretary-General of the United Nations presents his compliments to the Secretary of State for External Affairs of ————— and has the honour to refer to resolution 555 (XVIII) adopted by the Economic and Social Council on 28 July 1954 on the subject of World Calendar Reform, the text of which reads as follows:

"The Economic and Social Council,

"Noting the proposal for a reform of the calendar by international agreement contained in document E/2514,

"Feeling that to enable further consideration of the proposal it is necessary to obtain the views of governments of States Members and non members of the United Nations, on the desirability of calendar reform,

"1. Requests the Secretary-General to transmit document E/2514 and any other relevant documents to the governments of States Members and non members of the United Nations, with the request that they study the problem and furnish their views by some time early in 1955;

"2. Decides to consider the matter again at its resumed nineteenth session together with the replies received from governments."

In pursuance of paragraph 1 of the operative part of the above resolution, the Secretary-General has the honour to transmit herewith the United Nations documents listed below which were issued in connexion with the consideration of the item on World Calendar Reform at the eighteenth session of the Council (with the exception of the last one, E/465, which was issued at an earlier date and to which reference is made in E/2514):

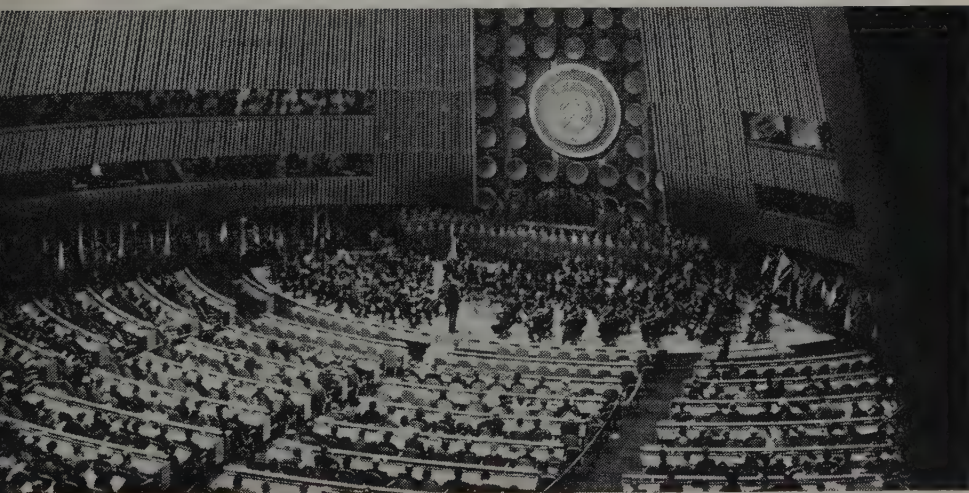
E/2513/Add.1: Basic programme of the Economic and Social Council for 1954, note by the Secretary-General

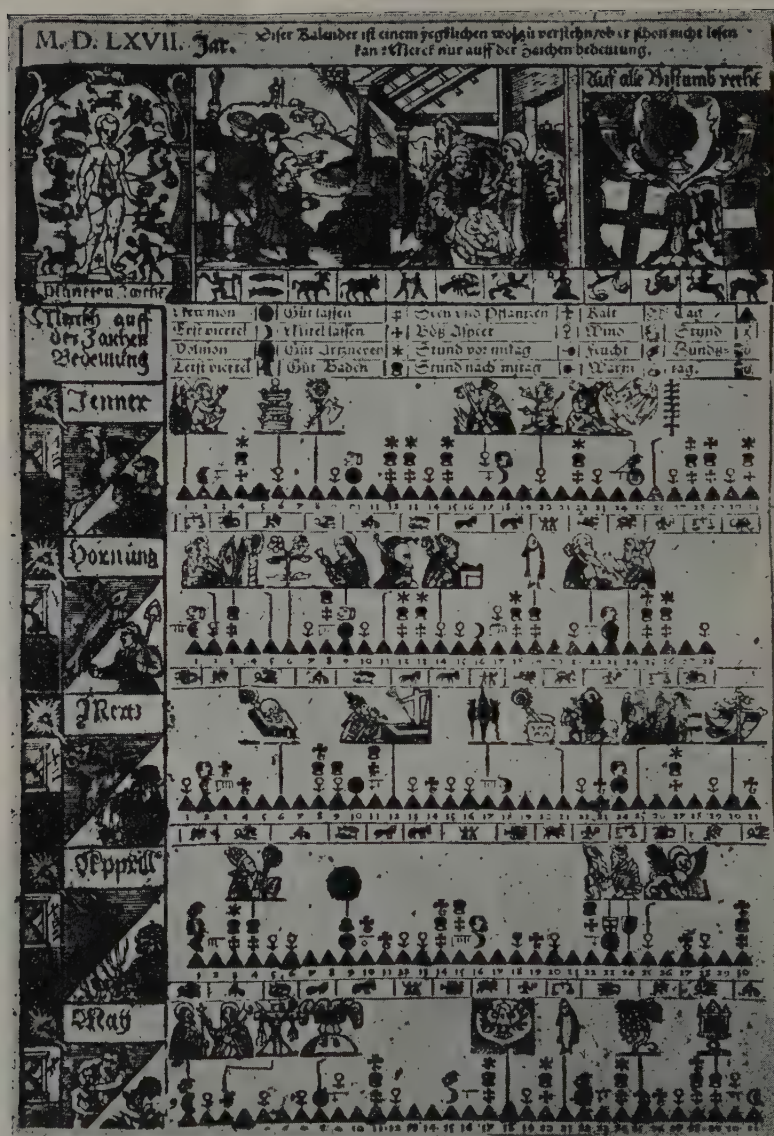
E/2514: World Calendar reform: Communication dated 28 October 1953 from the Permanent Representative of India to the United Nations to the Secretary-General

- E/SR.753: Economic and Social Council, Summary Records of the 753rd meeting
- E/C.2/SR.140: Council Committee on Non-Governmental Organizations, Summary Records of the 140th meeting
- E/C.2/389: Statement submitted by The World Calendar Association International, a Non-Governmental Organization on the Register of the Secretary-General
- E/2562: Report of the Council Committee on Non-Governmental Organizations
- E/C.2/SR.145: Summary Records of the 145th meeting of the Council Committee on Non-Governmental Organizations
- E/2632: Report of the Council Committee on Non-Governmental Organizations
- E/L.628: Draft resolution submitted by India and Yugoslavia
- E/SR.819: Economic and Social Council: Summary Records of the 819th meeting
- E/465: The World Calendar: Note by the Secretary-General.

In accordance with the same paragraph of the resolution, Governments are invited to communicate their views on the subject at their earliest convenience. In view of the fact that the Council has decided to consider the matter again at its resumed nineteenth session, which is scheduled for the period 16 May to 3 June 1955, it would be desirable if the reply of the Government could reach the Secretariat by 15 March 1955 in order that the Secretary-General's report on the question could be circulated six weeks before that session as required by the Rules of Procedures of the Council.

United Nations Day celebration at U. N. Headquarters, 24 October 1954. (U. N. Photo)





A single sheet calendar from 1567, printed in Augsburg. At the left, a blood-letter. At the right, coats of arms of Augsburg, Constance and Salzburg, with the inscription at the top: Good for the whole Diocese. Seven copies of this calendar are in the possession of the "Studienbibliothek" in Linz.

THE OLD PEASANTS' CALENDARS

Reprinted from Welt und Heimat (15 May 1954), Illustrated Supplement to the Tages-Post, Linz, Austria

UNDER the title "The Peasant's Calendar" there was inaugurated by the Folklore Department of the Provincial Museum under the direction of Dr. Franz Lipp an exposition which is worthy of consideration and deserves to be visited.

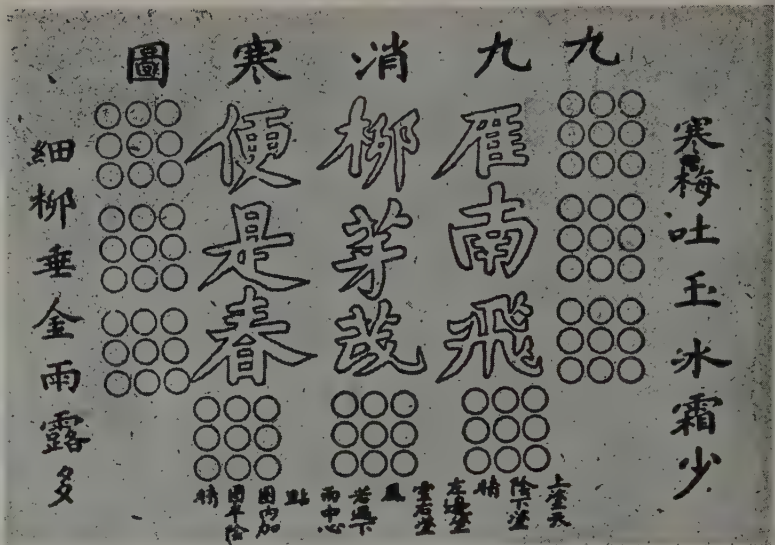
When we enter the big festival hall, the first thing which strikes our eyes is a colorful frieze with the "Mandln" (little men) of the last Peasant's Calendar which is still printed today in Graz. In the middle of the hall, there rises a short round column with curious symbols. These are the four heavenly animals of the Chinese, which correspond to our winged animals of the four Evangelists. At the left and the right of the hall, one can see through bay windows the saints of the winter and summer solstices, and we are captivated by the charming pictures of customs at those holy periods of the year. The walls are resplendent with masterfully painted representations of saints or of gods of the year by Pertiwieser, for example that of St. George who mounted high on a steed drives a lance through an evil dragon which is analogous to the Egyptian hero Horus in a corresponding attitude.

The showcases in the middle of the hall, around the column of the four directions of the sky and of the four seasons of the year, contain old peasants' calen-

dars, among which those carved on wood arouse our special interest. Most of these wooden calendars, only twelve of which exist today throughout all of France and Germany (this means the originals), are faithful reproductions which have been placed at the disposal of the exposition by the Linz collector, Dipl.-Ing. Robert Schindler. In the showcases around the walls underneath the colorful calendar frieze, the days, and months above them are elucidated by examples from the old peasants' calendars.

The calendar tradition encompasses all of Eurasia and can be traced back for many thousands of years. For example, the 60th day of the natural year, called in the Christian West St. Peter's Day, was mentioned by the oldest Greek poet Hesiod (who lived around 700 B. C.) in his didactic poem "Works and Days." The 120th day of the natural year, which we call St. George's Day, was marked in an Egyptian calendar as the day of the Hero and Saviour Horus. The inhabitants of Peiping and surrounding territory still reckon and use the figure of nine times nine days after the winter solstice, and in Styria and other places, people let the cattle graze in the Alpine pasture for nine times nine days after the summer solstice. We see the nine times nine circles of the Chinese calendar and we read the proverbial verse of the

The Chinese calendar of nine times nine days after the winter solstice. Each day one of the nine times nine circles is filled out with the weather sign, and each of the nine lines (branches) of written characters is blackened with India ink. These nine characters form a highly attractive verse, which, translated into English would read as follows:



When the pastures burst luxuriously into blossoms
When the wild geese come over
Then one knows that the spring is coming soon.



Wooden calendar from Brünn in Pustertal (Valley), for the moon cycle from 1526 to 1544. Months: April, May, June. At the top, the row of golden figures, and at the left, the picture of the month and the number of days.

Styrian peasants (mountaineers), preserved for posterity by Peter Rosegger, which reads as follows:

On St. Vitus' Day we go to the
Alpine pastures

On St. Rosalie's Day we go back
to the Valleys

St. Vitus or Veit falls on 15 June, the highly celebrated and real solstice day prior to the Gregorian calendar reform, whereas St. Rosalie falls on 4 September. One can ascertain himself that this is equivalent to 81 or nine times nine days.

The calendar is indispensable to the farmer. He has to know when to sow, plant and harvest his crops; he has to adapt himself to the solar year. Even though modern science does not admit that the moon has any influence upon the weather, the mere belief in it has had a very profound effect upon humanity.

One can see from the peasants' calendars, regardless of whether they were carved on wood or printed on paper, to what trouble people used to go in order to know in what part of the zodiac the moon would stand, considering that they managed their lives accordingly. There were special signs showing when one was supposed to sow, the right time for a bloodletting and the time to get a haircut. For women, it was indicated on what days it was advisable to wean the children, and other information of similar nature. The signs of the golden figures, with the aid of which one could find the new moons, were marked with bar or peasant figures drawn similarly to the Roman figures, or else they were runic signs or figures.



The Styrian "Mandl" Calendar, thus called on account of its little men, the last peasant's calendar with picture characters. Among the little men: Weather signs, quarters of the moon, twin sons, etc.; day triangles as an imitation of notches on the edges of calendar bars; signs of zodiac in which the moon stands.

In glass cases, there are kept calendars from China as well as from Mexico. The colorful Mexican folder with hieroglyphics reminds one of the Styrian "Mandl" Calendar. There is much in common, and notably not only the little men in colors, but also certain details, in the tenor, for example the days of nine times nine and seven times seven, which in Mexico are denoted by a footprint, and in the Christian West by a hand, a rose or a cross mark. In lieu of a rose, a St. Rosalie can point to the day.

New and unknown horizons are opened to those who thoughtfully compare the calendars from the East and from the West. There has disappeared that knowledge which to our thinking ancestors appeared to be a divine art.



The proposed new World Calendar offers many advantages, its advocates claim

*(Reprinted in part from Ethyl News,
published by Ethyl Corporation, New York)*

AERICAN business, by necessity, works with the calendar, but is the calendar working with American business? That is the question some people are asking very earnestly today.

Our calendar is inconsistent, they say, noting how dates vary from one day of the week to the other, depending on the year, and with no apparent reason. Furthermore, the quarters are not equal, the number of working days in each month varies, and many of the holidays on our present calendar occur in the middle of the week, when they might come on either Friday or Monday, if efficiency is desired.

To alleviate these troubles and to bring balance into the method of reckoning time, the United Nations is now considering a resolution to streamline this Gregorian calendar that we are using.

Big Money-Saver

Supporters of the measure claim that in business alone the new calendar would save billions of dollars. It would simplify accounting, they say, release railroads from the task of making up new time schedules every year, aid schools, courts and other institutions in setting opening and closing dates for their sessions, and generally reduce confusion in an overly confused world.

Advocates of The World Calendar point to regularity and consistency as the outstanding virtues of the new method. For instance, Election Day, at present the first Tuesday after the first Monday in November, would always be on Tuesday, 7 November, on The World Calendar.

Proponents of The World Calendar suggest that mid-week holidays be shifted to Monday. Long week-ends not only

are good for the general health, they say, but also are beneficial to industry in reducing absenteeism. Standardization of holidays also would enable businessmen to plan ahead more accurately in anticipating such things as gasoline demand, retail trade, newspaper circulation, and electric power loads.

The only holiday with which The World Calendar does not deal is Easter. The question of when Easter should fall is a religious one, The World Calendar Association says, and is a matter for the various churches to decide upon among themselves. Under our present calendar, Easter can occur on any date between 22 March and 25 April. Obviously, this 35-day variation has an important effect upon trade, with an "early" Easter frequently hurting it, and a "late" Easter encouraging people to buy.

Of Old Origin

Although The World Calendar as currently proposed is the work of hundreds of scientific minds, its origin goes back to 1834, and an Italian priest, Abbé Marco Mastrofini. In that year he published a scholarly book with the impressive title: *Amplissimi Frutti da Raccogliersi sul Calendario Gregoriano Perpetuo*. Freely translated that is "Final Results of Research on Perpetualizing the Gregorian Calendar."

The Abbé proposed a year of 364 days, beginning with Sunday, 1 January, and ending with a 365th "extra-calendrical" day to be designated a holy day or eighth weekday. In leap years there was to be another extra day which would be called "inter-calary day." Thus, Mastrofini was the pioneer of the one or two

stabilizing days which calendar reformers subsequently have adopted.

The problem of accounting for these extra days, while at the same time constructing a balanced calendar, was the block upon which other calendar reformers had stumbled. For the year is not exactly $365\frac{1}{4}$ days long. It is 365 days, five hours, 48 minutes and 45.51 seconds in length. This is 11 minutes and 14.49 seconds less than $365\frac{1}{4}$ days. Not much, but enough to amount to 19 hours in a century, and in 1,000 years to make the calendar about a week behind schedule.

This is precisely what happened under Julius Caesar's calendar. By 1582 the vernal equinox, when the sun begins moving northward again and so marks the first day of spring, was ten days late. It came on 11 March, although the Council of Nicea of the Roman Catholic Church had decreed in 325 A.D. that it was to fall on 21 March.

There was nothing to do but to correct the calendar by taking out ten days. This was done by Pope Gregory XIII, who directed that the day after 4 Octo-

Long week-ends for more leisure would result from The World Calendar's shifting mid-week holidays to Monday.



ber 1582 should be called 15 October. Thus, the present Gregorian calendar was established.

Pope Gregory also saw to it that this discrepancy would not come up again for thousands of years, by eliminating three leap years every four hundred years. Thus the years 1700, 1800, and 1900 were not leap years, but the year 2000 will be. This simple formula will keep the calendar approximately correct with the seasons for about 3,300 years.

Organized Backing

Support for the movement is organized in The World Calendar Association, a non-profit organization with headquarters in New York and affiliates in many cities of the world. Heading The WCA is Miss Elisabeth Achelis, a dedicated and long time proponent of calendar reform. Besides the greater order which she holds this new calendar would bring into the

world, Miss Achelis sees it as one major point upon which all the nations of the world might unite and set an example of international cooperation.

Along with Miss Achelis there is an impressive list of individuals and organizations in a variety of fields who favor calendar reform. Among these are the comptrollers of some leading American business firms. In answer to a survey, several hundred of these corporate officials indicated that the present calendar does cause business complications which a new calendar might eliminate.

Advocates for the change in calendars point to 1 January, 1961, as the ideal date for the switch to be made with a minimum of difficulty. At that time both The World and Gregorian calendars begin the year on Sunday, 1 January. But whether there is to be a change in the system of numbering the days of our lives is something that only time will tell.

GIMBEL HEAD ENDORSES WORLD CALENDAR

*Statement by Arthur C. Kaufmann, Executive Head, Gimbel Brothers,
Philadelphia, to the READER'S DIGEST*

OUR interest in The World Calendar is strictly a selfish one because of the fact that its adoption would simplify and unify the operation of department stores throughout the world. It would tend towards making our planning more intelligent and bringing about greater uniformity in our operations—which would ultimately result in expense savings. Such economies, of course, would be passed along to the consumer in the form of lower prices. Our company policy makes it clear that we have only one boss—the customer; and, thus, we believe that the adoption of The World Calendar would please the “boss.”

A TALE OF TIME

By Frank L. Remington

From Think, October 1954

In our grandparents' day travel was a nightmare of conflicting time zones. Today, thanks to the Standard Time system, much confusion has been eliminated.

SCARCELY anyone these days gives a thought to Standard Time. Yet, without the four Standard Time zones—Eastern, Central, Mountain and Pacific—into which our country is divided, life as we know it would be all but impossible. Radio broadcasting and airplane travel, for instance, would be a hopeless muddle, as would a host of other activities which depend on coordinated planning and split-second timing. Only two generations ago, however, the Time Standard was unknown.

People of that day lived by Solar Time, which was based on the passage of the sun across the meridian and which changed one minute for every thirteen miles. Under this system, which was prevalent up to the adoption of railroad time in 1883, there was a difference of five seconds between the ends of the Brooklyn Bridge. People set their watches by the clock of the neighborhood jeweler, and no two jewelers agreed on the exact time.

To help remedy this muddle many large cities like Boston, New York and Kansas City put the time-ball plan into effect. This consisted of a large ball



Clock at Pennsylvania Station, N. Y. Without Standard Time, railroad travel today would be a hopeless muddle.

which was pierced by a mast that had been erected on some high building in the center of a town. The ball usually rested at the bottom of the mast, but each day about three minutes before noon the ball was elevated to the top of the mast. At precisely noon it was usually dropped by a signal sent by the Washington Naval Observatory or by some other observatory. It was a daily event which generally caused crowds on the streets to stop and watch.

The railroads found it difficult to operate on anything resembling a schedule. At noon, sun time, in Chicago it was 12:31 in Pittsburgh, 12:24 in Cleveland, 11:50 in St. Louis and 11:27 in Omaha. There were some twenty-seven local times in Michigan, thirty-eight in Wisconsin, twenty-seven in Illinois and twenty-three in Indiana.

In Pittsburgh railroads used no less than six standards of time for the arrival and departure of trains. In the Buffalo station there were three clocks, each with a different time for different trains. It has been estimated that in 1883 there were about a hundred different time zones operating in the country, none of

which was clearly definable. The railroads alone operated under sixty-eight local times.

The expansion of the railroads and the building of many new miles of track increased the confusion. A man traveling from Eastport, Maine, to San Francisco found it necessary to set his watch at least twenty times to be sure of making the proper connections. Only an experienced traveler could hope to make the trip without missing his train somewhere along the line.

The difficulties of living without a time standard can be appreciated by modern folks who travel from April to October. During that period they must not only adjust their watches to conform to the Standard Time zones through which they pass, but also make adjustments for Daylight Saving Time. The difficulty, of course, arises from the fact that there is no Federal law making Daylight Time mandatory. Some states require it by law; some have it by a more or less unwritten agreement; others don't bother with it at all. In some states that have it, certain cities don't and in some states that don't have it, certain cities do. The result for the modern traveler is confusing to say the least.

In 1883, railroad representatives met in a General Time Convention in St. Louis to consider the plans of William Frederick Allen, who had previously been elected secretary of the Convention. Allen's proposals were adopted by the Convention on 11 October 1883. Under his plan the United States was to be divided into four time zones based on the sun time at the 75th, 90th, 105th and 120th meridians west of Greenwich, or approximately on the longitudes of Phil-

adelphia, Memphis, Denver and Fresno, California. The zones were to be known as Eastern, Central, Mountain and Pacific.

Sunday, 11 November 1883, was the date set for putting the plan into effect. All railroad clocks were to be set to the new Standard Time at noon that day. Sunday was selected because there were fewer trains in operation and the change could be made with the minimum of inconvenience and the maximum of safety.

The railroads now issued new timetables and much of the confusion disappeared. Most people liked the idea and found it practical. Businessmen, schools, shippers and farmers adopted it readily, although there were some die-hards who delayed adopting it. There were those who thought the new time standard was a plot to enrich watchmakers and clock repairmen.

Even the pulpit denounced the new railroad time. "The railroads have no right to interfere with the movements of the sun," stormed Reverend Watson from his Tennessee pulpit soon after the new time went into effect. "It's sinful enough for them to run their locomotives on the Sabbath Day. Now they want to interfere with the Laws of God."

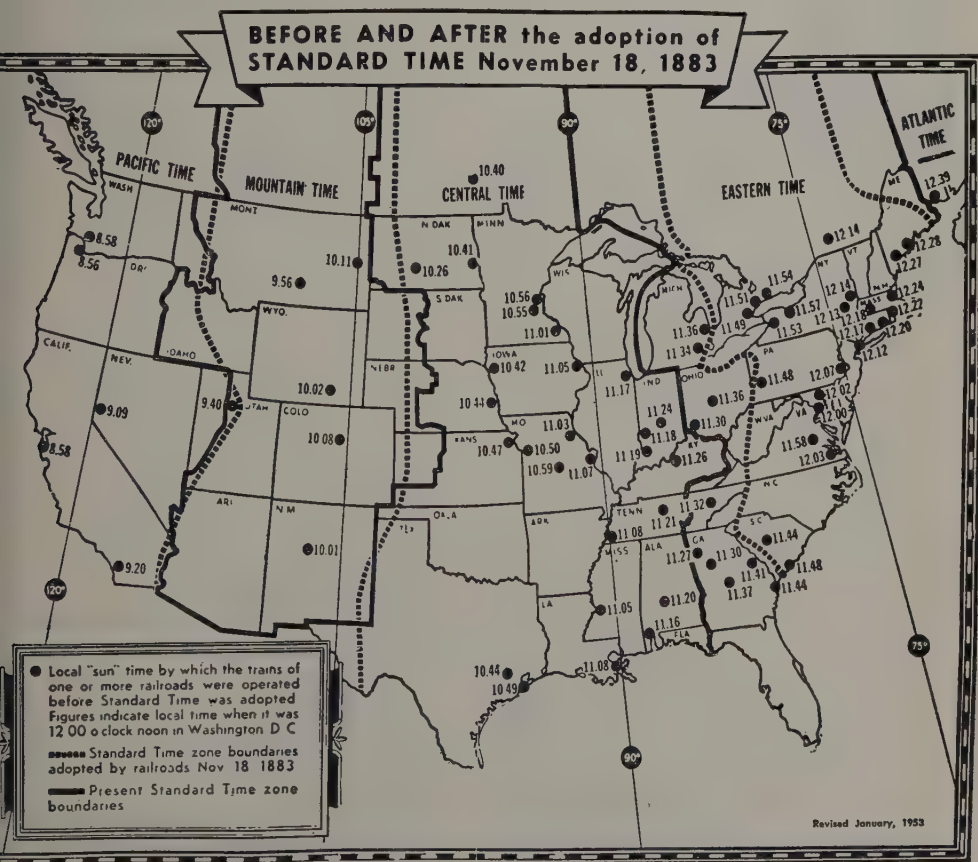
Reverend Watson was but one of many who opposed the adoption of railroad time. The mayor of Bangor, Maine, declared it unconstitutional on the grounds that no one had the power "to change one of the immutable Laws of God." In an editorial the Indianapolis *Sentinel* bitterly denounced railroad time. "The sun is no longer the boss," the editorial asserted. "In the future the planets must make their circuits by such timetables as railroad magnates arrange,"

Many cities and towns located on the borderline between two time zones found it difficult to decide which time to adopt. Pittsburgh and Erie, Pennsylvania, were on the borderline between the Eastern and Central Time zones, and public opinion in those cities was divided as to which time should be used by business establishments, schools, churches and citizens generally.

The United States Government was one of the last officially to recognize the change. The Attorney General issued a statement, saying no government office could adopt railroad time until so authorized by Congress. Actually it didn't get

around to giving its approval until 19 March 1918. The measure sanctioned the new time system and delegated to the Interstate Commerce Commission the duty of making definite boundaries between the four time zones and changing those boundaries when necessary.

Today, thanks to William Frederick Allen and the General Time Convention, no one faces the travel difficulties and general confusion of two generations ago. Few of the millions who pass through the Union Station in Washington, D. C., have noticed the bronze tablet in Allen's memory. He deserves an honored place for his vital contribution.



WORLD CALENDAR WOULD HELP ALL

By Sidney J. Harris

The following feature, reprinted in part by permission of General Features Corporation, appeared in newspapers throughout the U. S. and brought hundreds of requests for information to The World Calendar Association.

THE greatest enemy of progress—any sort of progress—is not a positive evil, such as war, disease, famine, pestilence or ignorance. It is a negative thing: human inertia and apathy.



HARRIS

Consider the least controversial reform that has been proposed in modern times—the adoption of a “world calendar” to replace the present one.

Replacing today’s slipshod and cumbersome calendar with a scientific World Calendar would lower taxes, reduce costs of government, help home-budgeting, equalize salary payments, save bookkeeping expenses, standardize school schedules, aid farmers to plan crops, simplify legal procedures, stabilize business planning and benefit everyone.

Our present Gregorian calendar (which was adopted hundreds of years ago, and was itself an improvement over the old Julian calendar) is responsible for tremendous confusion, waste and expense.

There are 28 different kinds of months; quarters and months begin and end on *any* day of the week; quarters are unequal in lengths; days and dates *never* agree from year to year; holidays vary; years begin on different weekdays; and our whole pattern of living

is unbalanced, unstable, and irregular.

A reformed World Calendar was first suggested more than 100 years ago by Catholic priest, Abbé Mastrofini.

In 1910, calendar reform was launched as a world-wide movement by the International Chamber of Commerce. Scores of business, scientific, educational and labor organizations support it in 36 countries.

Under the new system, we would have one unvarying calendar year; quarters would always begin on a Sunday and end on a Saturday; each month would have 26 weekdays, plus Sundays; day and dates would *always* agree from year to year; holidays would be fixed; each year would begin on Sunday, 1 January; every year would be comparable.

Yet, with all its manifest advantages, the new calendar has suffered from the fact that no *special interest* is concerned with promoting it. Its benefits are so general and widespread that no individual group was willing to take the time and energy for its promotion in Congress and the United Nations.

One such organization has now been formed: The World Calendar Association, Inc., 630 Fifth av., New York 20

This group depends on public support—not so much for money as for stirring wider national interest in the project. Why not drop this worthy organization a postcard today, to learn more about its plans and purposes?

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a new book*

by Elisabeth Achelis

OF TIME and the CALENDAR

Of Time and the Sun and the Seasons,
and of Man's Attempts to Make a
Scientific Calendar Leading to the
Proposal Now before Governments
and the United Nations for a
Stable Calendar Beneficial to the
Conduct of the World's Affairs

OF TIME and the CALENDAR

HERE in succinct form is everything you need to know about the history of the calendar—from the ancient moon calendar to the Gregorian Calendar adopted in the sixteenth century to The World Calendar now under consideration by the United Nations and the various governments of the world.

It's time for a change, Miss Achelis argues, and the improved calendar she has crusaded for since the early 1930s has now secured strong backing around the world and may be adopted by 1961.

OF TIME AND THE CALENDAR gives fresh convincing material to support the case for "One World Calendar for One World."

PUBLICATION PRICE \$2.75

YOU CAN SECURE THIS BOOK NOW AT A REDUCED PREPUBLICATION PRICE. JUST FILL OUT AND MAIL THE COUPON ON THE FOLLOWING PAGE WITH YOUR CHECK OR MONEY ORDER.

It would be a splendid thing if our 350,000,000 people could have a single national unified calendar. As most of the Indian calendars are arranged on a twelve-month basis, it would obviously be easier to meet on this common ground. I am in favor of such a calendar. I am in favor of a standardized calendar for the whole world. . . . I have been informed of, and I welcome, the international movement for calendar reform.—Mahatma Gandhi.

Different schemes of reform have been proposed. To my mind there is only one that is deserving of serious consideration, and that is the calendar advocated by The World Calendar Association.—Sir Harold Spencer Jones, Astronomer Royal.

Regarding the proposed World Calendar . . . I have previously been interested in this subject and have indicated my support for a World Calendar.—U. S. Senator James E. Murray.

The proposed World Calendar would be a unifying influence of the very first order. It would facilitate cooperation and understanding between the nations. . . . As a Christian minister I welcome the Plan and commend it from a conviction that its adoption would be a positive step forward, and a long one, in the direction of world harmony and peace.—Dr. Robert J. McCracken.

Special Offer to *Journal of Calendar Reform* Readers

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Please send me copy(ies) *Of Time and the Calendar* by Elisabeth Achelis at the special prepublication price of \$2.50 a copy.
I enclose check (money order) for \$. I understand that my copy(ies) will be sent at once, that they will be autographed by the author, and that you will pay the postage.

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About the Author

(Excerpts from a Profile by Geoffrey T. Hellman in *The New Yorker*)

"Miss Achelis has, since 1930, spent practically all her time trying to secure the universal adoption of a permanent, unchanging calendar. Her vehicle is The World Calendar Association, of which she is founder and president, and whose membership includes H. G. Wells, August Hecksher, Bishop Manning, William Green, Professor John Dewey . . . Miss Achelis's interest in the calendar came practically overnight, and has never flagged. . . .

"In the summer of 1929, when she was staying at the Lake Placid Club, feeling more or less at loose ends, she heard the club's proprietor, the late Dr. Melvil Dewey, give a talk on how to simplify life. [This started her on her work of simplifying the calendar.]

"Miss Achelis is a handsome blue-eyed woman who dresses fashionably and has a rather shy air. She speaks forcefully in well-modulated tones. She habitually wears earrings, a custom which originated as a measure of identification. She and her twin sister used to look so much alike that when they entered women's doubles tennis tournaments, their opponents were never quite sure which one was serving. To clear up the confusion, their brother gave Elisabeth a pair of earrings to be worn as a distinguishing mark."



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THE JEWISH ORIGIN OF THE WORLD CALENDAR

By Dr. Hashim Amir Ali

We publish below a recent letter from Dr. Hashim Amir Ali, Osmania University, Hyderabad, India, addressed to the President, World Calendar Association. Dr. Ali's contributions have already appeared in our issues for June 1953 and April 1954 and have aroused considerable interest. In this letter he suggests that, instead of opposing the reform, the Jews might well be expected to welcome it in due time because much of what is proposed conforms to a Jewish proposal dating back to two centuries before Christ.

Osmania University,
Hyderabad, India
23 September 1954

To The World Calendar Association, Int'l:

You must have learned from Dr. Saha that I had been nominated a member of the delegation from India to the meeting of the ECOSOC at Geneva, but was to go only when the proposal to introduce The World Calendar in 1956 was to be sponsored by India in the plenary session. The postponement of this to 1961 has deferred the opportunity of my being able to meet and discuss with you several points which I had in mind.

In the little brochure, entitled *The World Calendar at Geneva, 1954*, which you published, presumably at Geneva itself, and a copy of which Dr. Saha has sent me, the article explaining the Vatican's attitude* is most interesting. In brief, this article (a) absolves Pope Gregory, and Christianity in general, from the shortcomings of the so-called "Gregorian" calendar; (b) attributes the origins of these shortcomings to pre-Christian Rome; and (c) reminds us, delicately, in a footnote that the proposed Reform itself emanates from a Catholic priest, Marco Mastrofini, published in a book in Rome (1834) more than a century ago.

You have rightly given a warm welcome to this article which, I am sure, will have far-reaching effects in getting support for a proposal from such a large, widespread and influential sector of the human family as the Catholics.

As far as the present sponsors of the proposal are concerned, I am sure, they are sufficiently honest and liberal to give all credit wherever it is due. All great advances, whether in the realm of matter or ideas, are based upon innumerable similar advances by other human beings. India is happy to admit that it is merely supporting a valuable proposal by The World Calendar Association, established in

*See *Journal of Calendar Reform* (September, 1954), pp. 137-140.

America; and The World Calendar Association has, in turn, referred in several of its publications to the origin of this proposal by Marco Mastrofini, a Catholic priest.

Incidentally, Father O'Connell, in his article has done me the honor of quoting a passage from my article published in the April 1954 number of the *Journal of Calendar Reform* and has called certain statements of mine as "deviation from the historic truth." I am indeed grateful to the Director of the Vatican Observatory for this observation and shall address him directly to correct my impression and add to my knowledge. Here I might only mention that my article was merely an extract from a brochure published in 1946, wherein I had offered bouquets and also advisedly thrown a few pebbles mischievously at the origins of "Hindu," "Muslim" and "Christian" calendars in order to provoke thought. So, even if I have been inadvertently guilty of "deviation from the historic truth," the fact that this "deviation" has succeeded in evoking this article from the Vatican transforms it into a worthwhile sin. If only my remarks against the "Muslim" calendar were also to evoke thought and response from responsible quarters in the Muslim World, however adverse they might be, my aim will have been entirely fulfilled!

But my purpose in writing this letter is neither to carry on, nor even to close gracefully, a controversy. It is meant to bring to your notice a very interesting reference to Jewish history, of which you are perhaps already aware, but which has come to me recently, bringing with it a hope that The World Calendar might, through it, become as acceptable to the Jews as it has evidently become to the Catholics.

On first coming across a reference to the *Book of Jubilees* in the *Encyclopaedia Britannica*, I have referred to a work entitled *Judaism* by C. F. Moore, published by the Harvard University Press, Cambridge, in 1927. This again refers to a book entitled *The Book of Jubilees* by R. H. Charles, published in 1902. The latter work I have not been able to secure easily and must therefore leave you to obtain in New York.

The sum and substance of the reference is that, as early as two hundred years B.C., a Jewish scholar seems to have classified Jewish history up to that period into years of 364 days each with four equal quarters, the first month of each quarter having 31 days, and the other two 30 days each! To give an exact quotation:

Instead of a year of twelve lunar months rudely adjusted to the solar year by intercalation, when necessary, of a thirteenth month, the author [of the *Book of Jubilees*] would have a solar year of fifty-two weeks (364 days), divided into four quarters of 13 weeks each . . . without regard to the moon, which disorders all measures of time . . . (Moore, Vol. I, pp. 193-4)

And here is another:

The same kind of solar year of 364 days is defined in a description of the movements of the sun and the stars and of the moon, that has come down to us in the Ethiopic *Book of Enoch* (cc 72-75; 78) and was doubtless meant to be taken for the astronomical observations of that explorer of the heavens. (*Ibid.*)

This is, curiously enough, exactly what is proposed now. But what was to be

one in the 365th, and at times 366th, day is not clarified in the reference to the reckoning which I have at present. Moore seems to think that this fundamental fact was entirely overlooked and goes on to comment as follows:

The motive for this reckoning was probably not the mere charm of symmetry, but the desire to create a distinctly Jewish division of time fundamentally unlike those of other peoples, and particularly that of the Greeks. In the reaction against Hellenism in the second century such a motive is intelligible enough, and the end to be achieved may well have seemed of sufficient moment to outweigh the inconveniences of a year that was a day and more shorter than a mean solar year, especially as the consequences would become serious only by accumulation . . .

But G. Schiaparelli in his *Astronomy in the Old Testament* (Oxford, 1905) has the following footnote on page 127:

In the pseudographic *Book of Enoch* and in the *Book of Jubilees* (both written at dates not far from the beginning of our era) very crude ideas are still found on the elements of the luni-solar calendars. The *Book of Enoch* supposes that the lunar year is one of 354 days exactly, the solar year of 364. (R. H. Charles, *Book of Enoch*, p. 187, 5qq.)

Not having the *Book of Jubilees* or the *Book of Enoch* available, I am not in a position to examine whether the 365th and the 366th days have been overlooked as a matter of expediency (Moore), omitted due to ignorance (Schiaparelli), or provided for in some other way as I am inclined to suspect. Perhaps Professor Baron of Columbia University can throw further light. Or some one or another of numerous scholars of Jewish lore would perhaps come forward to clarify the problem.

But no matter which of the three alternatives is accepted, the proposed year of 364 days with four equal quarters of 91 days each and the first month of each quarter having 31 days, all this is sufficiently close to The World Calendar proposed now for the Jews to claim as much hand in its origin as the Catholics because of the proposal of Mastrofini. In fact, with all due apologies to the revered Catholic Priest, some Rabbi may well claim that Mastrofini himself either borrowed the idea in toto from the *Book of Jubilees* or merely added to the two-thousand-year-old proposal an addition of his by proposing that the 365th day should be given a name distinct from any weekday!

In any case, this reference to a calendar, identical with or very similar to the currently proposed World Calendar, two thousand years ago, goes to prove that, as for other great ideas, *no one person or nation can claim all the credit*. They are the outcomes of human thought and endeavor extending back into unstudied realms of humanity's hoary past. And the recognized contribution which Judaism has made to origins of Christianity and Islam should deter us from hesitating to concede that they again are perhaps the originators of the proposal which the rest of the world is accepting now. And surely it is not for Judaism now to oppose a suggestion which has emanated from one of their own predecessors even before the Julian calendar came into existence!

Yours very cordially,

(signed) AMIR ALI

Dr. Ricardo J. Alfaro Joins World Advisory Committee

THE WORLD CALENDAR ASSOCIATION, International, takes special pride in announcing that the distinguished statesman, His Excellency, Dr. Ricardo J. Alfaro, of Panama, has accepted its invitation to become the Honorary President of its Panama Affiliate and to serve as a member of the World Advisory Committee of the Association.

On 18 April 1949 Dr. Alfaro, Chairman of the Delegation of Panama, proposed The World Calendar to the United Nations. His distinguished career was summarized in this *Journal* at that time (June, 1949, pp. 140-141). Since 1948, among many other major assignments in international affairs, Dr. Alfaro has been a member of the International Law Commission of the United Nations, serving as Chairman 1952-1953.

Dr. Alfaro on behalf of his Government signs the Convention on the Prevention and Punishment of the Crime of Genocide at the Palais de Chaillot, Paris, 11 December 1948 (United Nations Photo).



FARMERS WILL BENEFIT

By Frank Kelly

Reprinted by permission from American Oil Company's 1955 edition of the Farmer's Journal and Almanack, produced by The Joseph Katz Company, Advertising. (Cartoons by The World Calendar Association.)

THE world may be on the threshold of an important reform which would bring real benefits to every human being and no real harm to anybody. The calendar we now use—erratic, confused, inaccurate—may be replaced by an accurate, balanced, stable calendar long advocated by scientists and leaders in many fields.

This is a crucial year for people all over the earth—astronomers, educators, businessmen, government officials, farm and labor leaders—who have worked patiently for the perpetual calendar sponsored by The World Calendar Association. This calendar plan was favorably considered last summer by the Economic and Social Council of the United Nations, and has been referred to the governments of 80 nations for possible action.

The World Calendar would involve few changes in the present calendar but it would bring many benefits—particularly to people whose work requires seasonal comparisons and long-range planning. Since these are requirements of modern agriculture, farmers would be in the forefront of those receiving direct benefits from the new calendar.

The shift from the present calendar to the perpetual plan would not create any disturbances in everyday life. It would not call for 13 months, or change the basic units of the day, week, month or year. The shift would be made easily and simply.

DEFECTS OF THE PRESENT CALENDAR

The present calendar, while it represents a great improvement on previous calendars and has served fairly well for some purposes, has a number of notable defects.

It is really fourteen different calendars, because a month-date can come on any of the seven days of the week, in both regular and leap years. The first quarter of a regular year is two days shorter than either of the last two quarters, and the second quarter matches none of the others. This throws statistics off, when you want to compare quarter with quarter or corresponding months from year to year.

The deficiencies and quirks of today's calendar interfere with the efficient operation of business, finance, government and law, disturb the systematic arrange-



ments of family households, and run counter to the interests of agriculture and labor.

[The writer here summarizes the major features of The World Calendar. See inside front cover of this *Journal*.]

SPECIAL GAINS TO FARMERS

It is obvious that such a balanced, dependable calendar would eliminate many time-consuming and unnecessary calculations—and bring special gains to farmers.

Successful farming—whether it is cattle raising, truck gardening, or tobacco growing; whether it has to do with dairy herds, fruits or other crops—calls for exact measurements, and for statistics that are comparable year by year, month by month, week by week.

Today's farmer goes in for a regular crop-rotation plan of three or four years duration, dependent upon location, soil, climatic conditions, type of crops, market demands, etc. The stockman, too, must keep accurate records of breeding times, feed-crop maturity, and similar matters.

Modern methods have brought the farmer more knowledge of bookkeeping, just as machine implements are facilitating his field labor. The proper planning of crops, to save in labor and outlay, requires a practical realization of "times and seasons."

To chart his progress and his income from year to year the farmer needs a scientific calendar. The World Calendar, worked out mathematically, answers the needs of twentieth century agriculture.



GERMAN ASSOCIATION FOR CALENDAR REFORM

29 November 1954

Internationale Handelskammer
Deutsche Landesgruppe
Köln I, Deutschland

To The World Calendar Association, Int'l:

We have now formed in Germany a "Gremium" called "Arbeitskreis für Internationale Kalenderreform," the chairman of which is Dr. Carl Boehm (Victoria zu Berlin Allgemeine Versicherungs AG., Düsseldorf). It is composed of some twenty members representing industry, wholesale trade, retailers, insurance, banking, transport and communication, chambers of commerce, etc. I shall serve as vice-chairman.

We are in close contact with the competent departments of our Government and with the Statistical Central Office.

Yours very sincerely

(signed) Dr. F. Haerecke



The New World Calendar is

NEARER THAN YOU THINK

The following article appeared in whole or in part in a number of national and specialized journals.

THE old leap year, with its addition of an extra day in the gloomy month of February, may be on its way out. Under The World Calendar plan, now under consideration by governments, celebration of leap year will be a world holiday—an added day at the end of June.

This will give another day for June weddings—and place the observance of leap year festivities in the traditional month of happy romance. Lovers all over the world have always longed to make June last forever—and The World Calendar plan will at least stretch it for an extra day.

Fact and fable are strangely mixed in the history of leap year, and what would seem to be fable turns out to be fact. For example, take the time-honored tradition under which girls may make their own proposals of marriage during leap years. This privilege is based on actual legislation, enacted in at least four countries several hundred years ago. According to ancient legend it was all started in Ireland by St. Patrick the missionary during the early part of the fifth century.

For more than 2,000 years man has

bowed to superstition in observing the 29th of February as the quadrennial leap-year day. The year began in March in the years before Christ, and February as the last month of the year was dedicated to “the dead of the nether world.” Because some superstitious people considered even numbers unlucky, the 28-day month of February was given a 29th day every four years to take the “bad luck” from it.

With the proposed World Calendar in operation, all such outmoded associations will be gone—and leap-year day will be given a “new look.” It will come at the most pleasant season of the year, at a time of gaiety and joy.

Adoption of The World Calendar, which has the backing of many scientific organizations, business associations, farm and labor groups, depends upon the expression of public opinion in countries where the plan is now being studied at the request of the United Nations. The reaction of these governments will undoubtedly be determined by the positive declarations of citizens and organizations in favor of the plan—and there are many of these, ranging from the American Association for the Advance-

ment of Science to the Business and Professional Women's Clubs.

Polls taken in the past by the United Press have shown that an overwhelming majority of leading American clergymen favor calendar reform. They prefer the 12-month equal-quarter plan—the type of plan embodied in The World Calendar—to the 13-month plan by a margin of 7 to 1. Other polls have shown that statisticians and economists believe a scientific 12-month calendar would bring large savings in time and money, eliminating the necessity for bookkeeping, scheduling and other recording operations required by the present unstable calendar.

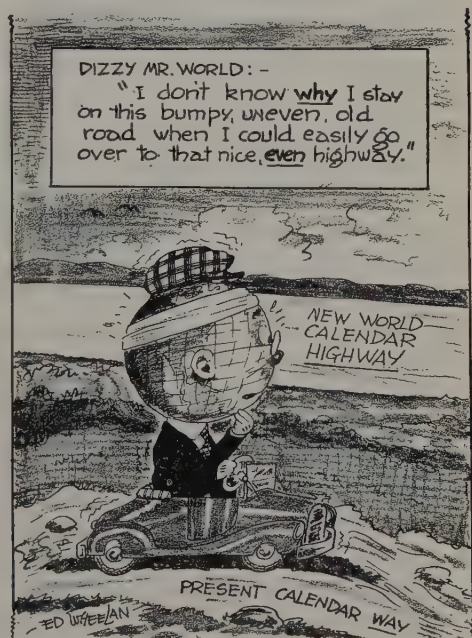
The shift from the present calendar to The World Calendar could be accomplished smoothly on 1 January, 1961, when New Year's under both calendars falls on the same day. Use of the new calendar would involve no drastic adjustments, because the familiar twelve months would be kept. At the end of the year there would be a new holiday—Worldsday—corresponding to 31 December, and every four years there would be the Leapyear Day, between June and July.

The World Calendar plan, proposed by the government of India, was favorably considered by the Economic and Social Council of the U.N. last summer. A resolution was unanimously approved by the Council, asking the Secretary-General to seek the opinions of the various governments early in 1955 on the subject of calendar reform. If the opinions are generally favorable, as seems likely, an

international committee can be organized to study ways in which such a plan would go into operation.

The quirks of the present calendar interfere with the efficient operation of business, finance, government and law, make holiday arrangements uncertain, disturb the budget plans of many American households, and run counter to the interests of agriculture and labor. That is why The World Calendar plan has such wide appeal.

If all the people who stand to gain by it—businessmen and brides, farmers and wage-earners, lawyers and accountants, everybody who seeks a balanced, stable, dependable calendar—speak up for it vigorously in the coming months, adoption of The World Calendar will be a sure thing.



Within Our Reach

A COMMON-SENSE CALENDAR

By John K. Lavett

Reprinted in part from Rydge's Business Journal (1 August 1954), Australia's leading business periodical. Mr. Lavett, F.Z.S. (Eng.), F.I.I.A. (Aust.), is Assistant General Manager of The Commonwealth Life (Amalgamated) Assurances, Ltd., and Deputy Chairman, Australian Affiliate, The World Calendar Association, International.

THE present Gregorian calendar was constructed in conformity with complete knowledge of the true length of the solar year—the time it takes the earth to complete the four seasons. It took many thousands of years before mankind attained the scientific knowledge necessary to calculate the correct length of the solar seasonal calendar, and during the process many habits, superstitions and foibles were acquired, which makers of the Gregorian calendar were unable to discard at the time.

Today, the calendar used by us labors under the blight of those old foibles. February, for instance, is an abnormally short month, because the early Romans made it the last month—the stepchild of the year, so to speak, and gave away its days to enrich other months.

The calendar of today is really a conglomeration of fourteen different calendars, seeing that any particular day of the month can come on any of the seven days of the week in both regular and leap years. Take 1 March for example. This date can occur on Monday, Tuesday, Wednesday, Thursday, Friday, Saturday or Sunday in regular years. In leap years it is pushed back one day by the introduction of 29 February.

Difficulties arising from the effects of the Gregorian calendar are in evidence every year. The first quarter of the year is two days shorter than either of the last two quarters, and the second quarter does not match any of the others. Imagine how that can throw statistics out when you compare quarter with quarter or corresponding months from year to year.

If these were merely matters of personal inconveniences, maybe one would put up with them; human nature is rather easy-going that way. But this unbalanced, irregular calendar does more damage than that. Besides the difficulties encountered by statisticians, there are many other instances (which will become readily apparent with only slight thought) where the deficiencies of our calendar throw a monkey-wrench into the smooth operation of business, finance, government and law, interfere with the systematic arrangement of a household, run counter to the interests of labor and agriculture, and so on.

The World Calendar represents an improvement of the Gregorian calendar under which nearly all the world is now operating, a modification that retains all the progress achieved by calendar-

makers in the past whilst clearing away the absurdities, the inconveniences and lack of balance hitherto present. . . .

SUPPORT OF REFORM

The World Calendar, the proposed improved system, that has already received the approval of 17 governments—Afghanistan, Brazil, Chile, China, Czechoslovakia, Esthonia, Greece, Hungary, Mexico, Norway, Panama, Peru, Saudi Arabia, Spain, Syria, Turkey, Uruguay—is the composite of many minds and many years of study and research. It was first suggested by a Roman Catholic priest, the Abbot Marco Mastrofini, in 1834. He advanced a plan for a 364-day year, with the 365th day added as an extra day "outside the week." By this simple method, every new year unfailingly begins with Sunday, 1 January, and the calendar becomes perpetual—a reliable and steady instrument of time. The Abbot is the father of modern calendar reform.

The movement for calendar reform is international in scope. Organizations like The World Calendar Association are actively advocating it in 36 countries. It was one of the most active projects in the League of Nations. At the latter part of 1953, the Government of India proposed to the Secretary-General of the United Nations Organization that The World Calendar be placed on the agenda of the 18th Session of the Economic and Social Council held at Geneva during last month. Australia was one of the countries approving India's proposal, the

other countries being France, Russia, Egypt and Uruguay. . . .

There has been a steady increase of interest in The World Calendar for many years. Calendar Reform as an international movement was launched by the International Chamber of Commerce in 1910. World organizations in the fields of commerce, science, education and labor have since supported the move. . . .

The main aim of the Australian body is to organize a widespread popular demand for Government support in the world movement which is taking place for the substitution of the existing calendar. . . .

HOW YOU CAN HELP

The "public demand" being the goal to be sought, here is where various Societies, Employers and Trade Organizations, etc., and even individuals can help. In their own sphere, they can use their influence to create a wider public interest and, in addition, the Movement will be assisted if representative organizations write to us, answering the following main points:

1. *Does your organization favor calendar reform?*

2. *If so, is it prepared to signify its support to The World Calendar?*

Besides its undoubted business, scientific and every-day value, The World Calendar will provide an over-all unifying force in the interests of World peace. It will serve as an example and model for future measures of joint benefit to the countries of the World.

AS A DOCTOR SEES IT

By M. Martyn Kafka, M.D.

(Published in The New York Physician, June 1953)

OUR world today is no longer as vast and as widely separated as most people used to feel even ten years ago. The spacious oceans no longer are barriers between continents. Majestic mountains soaring up to altitudes of twenty-five thousand feet no longer can keep a country isolated from other nations. Indeed, the world has shrunk to such a state that our neighbors ten thousand miles away are now only a short distance from us. Although it is accepted as commonplace today to hop in a plane and go off to a distant point in a matter of hours, this is still the most remarkable miracle of our current civilization.

It follows then that as we accept television, the radio and the airplane as outstanding changes of everyday life, we must also be ready to accept changes in our calendar system, which is confusing and irregular in keeping records of time.

Medical science has also made vast strides in fifty years. Ideas, thoughts and methods of diagnosis have been completely revolutionized. Miracle drugs have been developed which cure diseases that were heretofore resistant to any treatment.

Peoples from different parts of the world travel regularly from one distant area to another, and they may become ill and must be hospitalized in different parts of the globe. The medical profession needs uniform calendar systems in order to make it practical for hospital records to be interpreted in different countries of the world.

In India there are thirty different calendars, creating a very confused situation. In China, too, there are several systems of calendar records. A host of other smaller countries have their own methods of calendar computation.

Has not the metric system simplified the weights and measures of the world? Is not mathematics an accepted uniform method the world over for computations? Does not the medical profession have its uniform formulary for drugs and medicines? Are not anatomical terms internationally the same?

The World Calendar, as proposed by The World Calendar Association, Inc., is stable, orderly and well-balanced. Its four quarters are equal and each quarter is divided into three months or thirteen weeks; each month has twenty-six weekdays plus Sundays. Each year begins on Sunday, 1 January, and each working year begins on Monday, 2 January. Furthermore each quarter begins on Sunday and ends on Saturday. Most important of all, every year is the same and records can be computed long ahead of time without any complications in printing and planning. This will indeed simplify all forms of records not only in commerce but also in science and medicine. It is important to the medical profession to have this World Calendar, which will simplify the keeping of our records from different parts of the world.

MORE CALENDAR RESOLUTIONS!

THE World Calendar Association is happy to announce the following resolutions endorsing calendar revision—in addition to the hundreds of others previously received.

AMERICAN ACADEMY OF ARTS AND SCIENCES

November 12, 1954

Hon. John Foster Dulles
Secretary of State
State Department
Washington, D. C.

Dear Sir:

During the past quarter-century the American Academy of Arts and Sciences has on four occasions considered seriously the problem of calendar reform, which is of importance not only to scientists but to ordinary citizens in all countries. On October 9, 1935, our Council voted to support, of the plans that had been proposed, the twelve month, equal quarter plan.

On November 10, 1954, our Council reaffirmed its previous vote, and requested me to write to you urging that the appropriate officials of our government in Washington and at the United Nations support the resolution proposed by India and seconded by Yugoslavia and unanimously accepted in Geneva on July 28, 1954, by the United Nations Economic and Social Council. This resolution requests the Secretary General to transmit to all world governments relevant documents with a request that they study the problem and submit their views for consideration at the second half of the nineteenth session in New York, May, 1955.

This problem has been studied now for many years by able persons all over the world. Since agreement has at last been found among the representatives of many nations that the plan long championed by The World Calendar Association, International, is the most reasonable solution, it seems to us that now is the time for the influence of the United States government to be thrown to the support of the plan. We are convinced that the adoption of the plan will be of great benefit to all people.

Respectfully yours,
(signed) William C. Greene
Secretary

Professor Meghnad Saha, F.R.S., is arranging for a resolution endorsing The World Calendar to be placed on the agenda of the International Congress of Meteorology to be held at Geneva, Switzerland, 14 April 1955. Dr. Saha is a member of the House of People (The Parliament) of India, Honorary Director of the Institute of Nuclear Physics, Calcutta, and represented the Indian Council of World Affairs at the ECOSOC meeting at Geneva last July.

CANADIAN CHAMBER OF COMMERCE

The Canadian Chamber of Commerce requests the Canadian Government to support at the United Nations Assembly The World Calendar.

(Policy Declarations and Resolutions 1954-1955)

THE INTERNATIONAL CONGRESS OF CHRONOMETRY

4 October 1954

"The International Congress of Chronometry, meeting in Paris from 1 to 5 October 1954, grouping the representatives of 26 nations, after having heard the talk of Abbé Chauve-Bertrand on the reform of the calendar, declares itself favorable to the stabilization of a calendar which can be adopted by all the peoples, in place of those in use at the present time, and invites its President to transmit this vote to the Economic and Social Council of the United Nations as well as to all the Member and non member Governments of the U.N.O."

Congrès International de Chronométrie, Paris, 1-5 October 1954, Conservatoire National des Arts et Métiers (Abbé Chauve-Bertrand front row seventh from right).



PAN INDIAN OCEAN SCIENCE ASSOCIATION

18 September 1954

The World Calendar Association:

It is some time since I wrote to you last, but I have been very busy with the organization of the international Congress of this Association which was held here in Perth, Western Australia, and which has now concluded. You will be pleased to know that the following resolutions were carried unanimously by the official delegates assembled in general meeting:

Resolution 27:

"This Congress considers the present calendar, owing to its unbalanced and changing character, to be unsuited for its purpose as a time measure, and recommends the adoption of The World Calendar, which is perpetual and scientifically sound."

Resolution 28:

"That Resolution 27 be transmitted to the Secretary of the Economic and Social Council of the United Nations Organization with the request that it be included with the information to be forwarded to World Governments on calendar reform."

While these resolutions cannot be taken as representing the views of the Member Countries of the Association, they do represent the unanimous opinion of a large number of their leading scientists who attended the Congress. The following countries sent delegations: Australia, Burma, Ceylon, France, India, Madagascar, Malaya, The Netherlands, Pakistan and Portugal.

Yours sincerely,

(Signed) A. D. Ross
Hon. Secretary

SYRIAN ORTHODOX ARCHDIOCESE

6 October 1954

The World Calendar Association:

The official report of the transactions of the 1954 Convention of the Syrian Orthodox Archdiocese of New York and All North America [representing about 50,000 members] held at the Commodore Perry Hotel, Toledo, Ohio, from 24 August through 29 August, has just been issued.

You will be happy to learn that the Convention unanimously passed the following Resolution:

"Resolution V:

"Whereas, it appears that there is adequate scientific basis for the conclusion that both the Julian and the Gregorian calendars are obsolete, and

"Whereas, numerous organizations, political, religious, and commercial are in favor of considering the advisability of the adoption of a universal calendar, and

"Whereas, an organization known as 'The World Calendar Association, International,' of New York City has, following exhaustive study, developed such a calendar, known as 'The World Calendar,' be it resolved that,

"This ninth annual Convention of the Syrian Antiochian Orthodox Archdiocese go on record as favoring the universal adoption of 'The World Calendar'." . . .

Very truly,

(Signed) Rev. P. W. S. Schneirla
Archdiocesan Secretary

ENDORSEMENTS

BUSINESS

Industrial Association of Austria	1937
Book Dealers Association of Austria.....	1937
Merchants Association of Austria.....	1937
National Cooperative Organization of Small Trades (Austria).....	1937
Association of the Restaurant and Hotel Trades (Austria).....	1937
California Drycleaner's Association.....	1941
Milwaukee Society of Accountants.....	1941
Johnstown (Pa.) Advertising Club.....	1943 (reendorsed 1950)
Pennsylvania Retailers Assn. (Lancaster).....	1944
Manufacturers' Assn. of Delaware County (Pa.).....	1944
American Industrial Bankers Association.....	1944
American Institute of Accountants.....	1944
International Affiliation of Sales and Advertising Clubs.....	1944
Associated Employers of Oregon.....	1944
Family Finance Corp. & Security Bankers Mgmt. Corp. (Wilmington, Del.).....	1944
Kansas City (Mo.) Branch Railway Mail Assn.....	1944
Mexican Hotel Association.....	1945
Canadian Retail Federation.....	1945
Newspaper Advertising Executives Association.....	1946
Quality Bakers of America Cooperative, Inc.....	1946
Controllers' Congress, National Retail Dry Goods Assn.....	1947
Canadian Manufacturers Association.....	1948
Inst. of Hand Crafts and Small Industries (Santa Ana, El Salvador).....	1949
Inter-American Press Congress.....	1949
Consulting Management Engineers Assn.....	1950
Canadian Railway Association.....	1950
T.A.B. Engineering Organization.....	1951
Canadian Construction Association.....	1952
Retail Traders Association (New South Wales).....	1954

CHAMBERS OF COMMERCE

Bradford (England) Chamber of Commerce.....	1933
Nottingham (England) Chamber of Commerce.....	1933
Wolverhampton (England) Chamber of Commerce.....	1933
Dewsbury (England) Chamber of Commerce.....	1933
Gloucester (England) Chamber of Commerce.....	1933
Plymouth (England) Chamber of Commerce.....	1933
Winchester (England) Chamber of Commerce.....	1933
Ipswich (England) Chamber of Commerce.....	1933
Stroud (England) Chamber of Commerce.....	1933

Woolwich (England) Chamber of Commerce.....	1933
Luton (England) Chamber of Commerce.....	1933
Mansfield (England) Chamber of Commerce.....	1933
Reading (England) Chamber of Commerce.....	1933
Londonderry (Ireland) Chamber of Commerce.....	1933
Hitchin (England) Chamber of Commerce.....	1933
Chester (England) Chamber of Commerce.....	1933
North Wales Chamber of Commerce.....	1933
New York State Chamber of Commerce.....	1935
St. Louis Chamber of Commerce.....	1935
Coffeyville (Kan.) Chamber of Commerce.....	1935
Galveston Chamber of Commerce.....	1935
London Chamber of Commerce.....	1936
Association of British Chambers of Commerce.....	1936
Federation of Chambers of Commerce of the British Empire.....	1936
Austrian Board of Trade.....	1937
National Chamber of Trade (England).....	1937
Bd. of Trustees, Retail Trade Bureau (Portland, Ore.).....	1941 (reendorsed 1950)
Pittsburgh Chamber of Commerce.....	1943
Junior Chamber of Commerce of Pittsburgh.....	1943
Danville (Ky.) Chamber of Commerce.....	1943
Lancaster (Pa.) Chamber of Commerce.....	1943
Cumberland (Md.) Chamber of Commerce.....	1943
Chillicothe (Mo.) Chamber of Commerce.....	1943
Hagerstown (Md.) Chamber of Commerce.....	1943
Chicago Association of Commerce.....	1943
Hibbing (Minn.) Chamber of Commerce.....	1944
Independence (Kan.) Chamber of Commerce.....	1944
Olean (N. Y.) Chamber of Commerce.....	1944
Halifax (Nova Scotia) Board of Trade.....	1944
Pasadena (Cal.) Chamber of Commerce.....	1946 (reendorsed 1950)
Orillia (Ont.) Board of Trade.....	1948
Ottawa Board of Trade.....	1948
Montreal Board of Trade.....	1948
Belleville (Ont.) Chamber of Commerce.....	1949
Shelby (N. C.) Chamber of Commerce.....	1949
Tallahassee Junior Chamber of Commerce.....	1949
Rhineland (Wis.) Chamber of Commerce.....	1949
Brantford (Ont.) Board of Trade.....	1949
Duncan (B. C.) Chamber of Commerce.....	1950
Winnipeg (Ont.) Chamber of Commerce.....	1950
Trail Board of Trade (Canada).....	1951
Chester (Nova Scotia) Board of Trade.....	1951
Women's Section, Fresno (Cal.) Chamber of Commerce.....	1951
Fresno (Cal.) County and City Chamber of Commerce.....	1951
Quebec Board of Trade.....	1951
Osaka (Japan) Chamber of Commerce.....	1951
Canadian Chamber of Commerce.....	1951 (reendorsed 1954-1955)
Tokyo Chamber of Commerce.....	1951
Kamloops (Ont.) Chamber of Commerce.....	1953
Kenora (Ont.) Chamber of Commerce.....	1953
St. Thomas (Ont.) Chamber of Commerce.....	1953
Digby (N. S.) Chamber of Commerce.....	1953
Dartmouth (N. S.) Chamber of Commerce.....	1953
Halifax (N. S.) Chamber of Commerce.....	1953
St. John (N. B.) Chamber of Commerce.....	1953
Saskatoon (Sask.) Chamber of Commerce.....	1953
Barrie (Ont.) Chamber of Commerce.....	1953
Windsor (N. S.) Chamber of Commerce.....	1953
Montreal Chamber of Commerce.....	1953
Boissevain 8 Dist. (Man.) Chamber of Commerce.....	1953
Yorktown 8 Dist. (Sask.) Chamber of Commerce.....	1953

EDUCATION

National Association of Education of Chile.....	1936
National Education Association (U. S. A.).....	1937
World Federation of Education Associations.....	1937
Association of Teachers of Mathematics in New England.....	1944
Texas State Teachers Association.....	1944
National Council of Geography Teachers (U. S. A.).....	1944
Faculty Science Club of Western Michigan College.....	1944
American Educational Research Association.....	1948
Mathematics Club of Gustavus Adolphus College (Minn.).....	1948
Lake Placid Club Education Foundation.....	1949
California Retired Teachers' Association.....	1952
Extemporaneous Public Speaking Class of San Diego State College.....	1952
Doshisha University (Kyoto, Japan).....	1952

FRATERNAL ORGANIZATIONS

Presidents' Section of the National Fraternal Congress of America.....	1934
Fraternal Congress of New York.....	1943
Fraternal Congress of Maryland and the District of Columbia.....	1943
Annual Report of the Secretary-Treasurer of Canadian Fraternal Congress.....	1943
Washington State Fraternal Congress.....	1943
Slovene National Benefit Society.....	1946

KIWANIS CLUBS

Hibbing (Minn.) Kiwanis Club.....	1944
Williamsburg (Brooklyn) Kiwanis Club.....	1944
Ely (Minn.) Kiwanis Club.....	1947
Easton (Pa.) Kiwanis Club.....	1947
Lewistown (Mont.) Kiwanis Club.....	1948
Belleville (Ont.) Kiwanis Club.....	1949
Madisonville (Ky.) Kiwanis Club.....	1950
Devils Lake (N. D.) Kiwanis Club.....	1951

LABOR

Labor Conference of American States (Santiago, Chile).....	1936
Canadian Congress of Labour.....	1947 (reendorsed 1951)
Canadian and Catholic Confederation of Labour, Inc.....	1950 (reendorsed 1951)
Canadian Telephone Employees' Association.....	1950
Trades and Labour Congress of Canada.....	1950 (reendorsed 1951)

LIONS CLUBS

West Chester (Pa.) Lions Club.....	1942
Ventura (Cal.) Lions Club.....	1943
Ephraim (Utah) Lions Club.....	1943
Sandersville (Ga.) Lions Club.....	1943
Wooster (O.) Lions Club.....	1943
Hayward (Cal.) Lions Club.....	1943
Port Neches (Tex.) Lions Club.....	1943
Camden (Tenn.) Lions Club.....	1943
Pittsburgh (Pa.) Lions Club.....	1943
Palatine (Ill.) Lions Club.....	1943
Cedar Falls (Ia.) Lions Club.....	1946
Bovey (Minn.) Lions Club.....	1947
Districts 29-V 29-W, Lions Int'l (West Virginia).....	1947
Harrisburg (Pa.) Lions Club.....	1954

RELIGIOUS ORGANIZATIONS

General Convention of the Protestant Episcopal Church (U.S.A.)..... 1934
College of Bishops of the Methodist Episcopal Church South (U.S.A.)..... 1935
Reformed Church in America..... 1936
Universal Christian Council for Life and Work..... 1936
American Lutheran Church..... 1936
Evangelical Lutheran Synod of Missouri, Ohio and other States..... 1938
Council of Bishops of the Methodist Church (U.S.A.)..... 1940
Suffolk North Assn. of Ministers (Mass.)..... 1943
Olivet Presbyterian Church (Harrisburg, Pa.)..... 1944
Congregation of First Unitarian Church (Louisville, Ky.)..... 1947
Lansford Ministerium (Pa.)..... 1949
Syrian Orthodox Archdiocese of New York and All North America..... 1954

ROTARY CLUBS

Chelsea (Mass.) Rotary Club..... 1941
Devils Lake (N.D.) Rotary Club..... 1943 (reendorsed 1951)
Yoakum (Tex.) Rotary Club..... 1943
Johnstown (Pa.) Rotary Club..... 1943 (reendorsed 1950)
Dover (N. J.) Rotary Club..... 1946
Orillia (Ont.) Rotary Club..... 1948
Belleville (Ont.) Rotary Club..... 1949
Owatonna (Minn.) Rotary Club..... 1952
Moorhead (Minn.) Rotary Club..... 1952
El Monte (Cal.) Rotary Club..... 1952
Studio City (Cal.) Rotary Club..... 1952
New Haven (Conn.) Rotary Club..... 1952
Chandler (Ariz.) Rotary Club..... 1952

SCIENCE

International Astronomical Union, Commission 32..... 1922
Committee for Maritime Meteorology..... 1922
Seventh American Scientific Congress (Mexico City)..... 1935
American Philosophical Society..... 1935
American Academy of Arts and Sciences..... 1935 (reendorsed 1954)
American Association for the Advancement of Science 1935
Mathematical Association of America..... 1935 (reendorsed 1937)
South Carolina Academy of Science..... 1936
East Bay Astronomical Assn. (Oakland, Cal.)..... 1936
Academia de Ciencias y Artes de Barcelona (Spain)..... 1936
Faculty of the School of Industrial Engineers of Barcelona (Spain)..... 1936
Ninth General Chilean Scientific Congress (Valparaiso)..... 1936
Institute of Radio Engineers, Board of Directors (New York City)..... 1936
Science Society of China..... 1937
Academy of Science of St. Louis..... 1937
Astronomical Society of Decatur (Ill.)..... 1937
Astronomical Society of Spain and America..... 1937
National Institute of Planning and Social Reform of the Republic of Cuba..... 1937
American Psychological Association..... 1940 (reendorsed 1947)
Assn. of Professional Engineers of the Province of New Brunswick..... 1944
Engineering Profession in British Columbia..... 1944
Australian Branch of the Institute of Physics..... 1944
Detroit Astronomical Society..... 1945
Toronto Centre, Royal Astronomical Society of Canada..... 1945
Winnipeg Centre, Royal Astronomical Society of Canada..... 1946
Edmonton Centre, Royal Astronomical Society of Canada..... 1946
Montreal Centre, Royal Astronomical Society of Canada..... 1946
Royal Astronomical Society of Canada..... 1946
Royal Society of Queensland (Australia)..... 1946

Royal Society of New South Wales.....	1946
Australian National Research Council.....	1946
Wellington Branch of Royal Society of New Zealand.....	1946
Yakima Amateur Astronomers (Washington).....	1947
Amateur Astronomers Association of Pittsburgh.....	1947
National Capital Astronomers (Washington, D. C.).....	1948
Otago Branch, Royal Society of New Zealand.....	1948
New South Wales Branch, British Astronomical Assn.....	1948
Royal Society of New Zealand.....	1948
Quebec Centre, Royal Astronomical Society of Canada.....	1948
Peel County Medical Society (Ontario).....	1949
American Psychical Institute, Inc.....	1949
American Society of Agricultural Engineers.....	1949
Burnham Astronomical Society (Chicago).....	1949
Ontario Medical Association.....	1949
Royal Canadian Institute.....	1950
Colombian Academy of Exact Sciences, Physical and Natural Chemistry.....	1950
Astronomical Society (Portland, Ore.).....	1953
Belgian Committee on Astronomy.....	1954
Astronomical Society of South Australia.....	1954
Pan Indian Ocean Science Association.....	1954
International Congress of Chronometry.....	1954

Y'S MEN'S CLUBS

International Association of Y's Men's Clubs.....	1948
Rochester (N. Y.) Y's Men's Club.....	1949
Wakefield (Mass.) Y's Men's Club.....	1949
Pasadena (Cal.) Y's Men's Club.....	1949
Woodstock (N. B.) Y's Men's Club.....	1949

MISCELLANEOUS

National Story League (U. S. A.)	1936
Humanist Society of Friends (Los Angeles).....	1939
Nat'l Fed. of Business and Professional Women's Clubs....	1940 (reendorsed 1948-49)
National Council for Promotion of Father's Day (N. Y. C.).....	1941
Women's City and County Club, Inc. (Poughkeepsie, N. Y.).....	1943
Peoples Mandate Committee for Inter-American Peace and Cooperation.....	1943
Penryth Club (Toronto, Canada).....	1943
Amateur Athletic Union of the U. S.....	1943
Portales (N. M.) 20-30 Club.....	1943
National Theatre Conference (U. S. A.)	1944
Akron (O.) Toastmasters Club.....	1944
Agricultural History Society (Washington, D. C.).....	1945
Professional Writers Club (Washington, D. C.).....	1946
Georgia State Nurses Association.....	1946
National Anti-Waste and Conservation Organization (South Africa).....	1946
The Sunday League, Inc. (U. S. A.)	1947
American Association of Scientific Workers.....	1947
William Morris Agency (U. S. A.)	1947
Dennison Chapter of American Assn. of Commons Clubs.....	1947
Jacksonville (Ill.) Toastmasters Club	1945 (reendorsed 1949)
Duodecimal Society of America.....	1948, 1952 (reendorsed 1953)
Carlyle Youth Discussion Club (Cumberland, England).....	1950
Exchange Club of Hickory (N. C.).....	1950
Northeast Washington Citizens Assn. (Washington, D. C.).....	1950
Canadian Federation of Agriculture.....	1950
Women's Institute of Chester (Nova Scotia).....	1952
Nassau County Women's Forum.....	1952
Centro Cultural "Nicolas Copernico" (Argentina).....	1953
West Algoma Local Council of Women (Port Arthur, Canada).....	1954

EDITORIAL PARAGRAPHS

Adoption of a World Calendar would correct inaccuracies and inconveniences in the present system. In this day when changes are being swiftly made in many walks of life, a change in calendars might be brought about with a minimum of annoyance.—*West Chester (Pa.) News.*

After a long struggle The World Calendar appears to be now in the realm of practical politics and international statesmanship. Its supporters are optimistic and the prospects for adoption appear to be excellent.—*Circuit, Toronto, Canada.*

One reason why the present calendar is not well adapted to modern use is that its months vary in length, containing all the way from 24 to 27 business days, whereas the suggested World Calendar has a uniform 26 business days in each month.—*Progress, Orlando, Fla.*

Proposals for revision of the calendar, now before the United Nations, would produce great convenience and simplicity.—*Mail, Madras, India.*

It's surprising that the calendar hasn't long since been regulated to the needs of international business. Here is an ideal subject for the United Nations to take up.—*Waterbury (Conn.) Republican.*

Our present calendar is irregular, imperfect and inefficient. Without any great trouble or disturbance, without changing our habits or traditions, it can be given a practical form which will be permanent, logical and scientifically correct.—*Figaro, Paris.*

Let's grab the chance to simplify our calendar. We know of no sound argument against the proposed change. In its favor are infinite time, money and headaches that would be saved.—*Nassau (L. I.) Review.*

Calendar reform is on the march. The proposal that presents the most logical, workable and satisfactory solution is The World Calendar. Advantages of this revision are obvious and the simplicity of the

plan makes its adoption easy.—*Saskatchewan Farmer, Regina, Canada.*

Today's calendar is inconsistent. The World Calendar offers a uniformity which has been lacking in all calendars since the first. Its advantages are obvious.—*Pawtucket (R. I.) Times.*

Defects of the present calendar are survivals from ancient compromises and superstitions. The new system will benefit many fields of endeavor, including transportation, industry, education, religion, home, government, labor.—*Herald, Sydney, Australia.*

Cost accountants are planning two all-day conferences at the Alexander Hamilton Hotel here. Prominent business men participating include Joseph M. Naab, vice-president of the Leslie Company, whose views on calendar reform have been widely publicized. He is a strong advocate of The World Calendar, which will relieve many accounting problems and expense now caused by irregularities of weeks, months and quarters.—*Paterson (N. J.) Call.*

Proposals internationally advanced by The World Calendar Association represent a far-sighted improvement on the present calendar, which in many ways is inconvenient and unscientific.—*Bombay Chronicle.*

Calendar reform should have United Nations approval.—*Sioux City (Iowa) Journal.*

Calendar reform, when adopted, will certainly bring the nationalities of the world into a closer bond of fellowship.—*Star, Toronto.*

Under The World Calendar a lot of inaccuracies and inconveniences inherent in our present time system would be ended.—*Zanesville (O.) News.*

Need for revision of the so-called Gregorian calendar is felt throughout the world because of the confusion and inconvenience caused by its irregularities and lack of uniformity.—*Express, Madras, India.*

FROM THE MAIL BAG

It is high time our calendar was reformed, to suit present-day requirements. The proposed World Calendar is no doubt the best possible solution, embodying the needs of current world situations.—Alfred Dharam Dass, M.P., New Delhi, India.

American scientists are all but unanimous in favor of The World Calendar, and hopeful that it will be adopted by the United Nations at the earliest date practicable.—Dr. W. E. Castle, Univ. of Calif., Berkeley.

I hope you will be successful in getting adoption of The World Calendar by all the countries in the world.—Pierre Salmon, Ingenieur General, Paris.

At the April meeting of the Portland Astronomical Society, the subject of discussion was calendar reform. Forty members enthusiastically approved The World Calendar, and expressed surprise that the proposed change had not already been put into effect, in view of its simplicity and reasonableness.—Paul E. Barden, Portland, Ore.

Time soon will come when The World Calendar will have world-wide success. This will eliminate many contradictions and controversies caused by sectarianism.—Rev. Isabelo Pacquing, Macatoc, Philippines.

Executives of trade associations are all interested in calendar revision because of the financial saving it would effect in industry. This saving happens to be specially important in the baking industry.—Charles J. Regan, Interstate Bakeries, Chicago.

At the Rotary Club of Camberwell, James Avery Joyce made a lucid address on calendar reform, which left no shadow of doubt in our minds as to the need for change.—W. J. A. Hahn, Secy, Dulwich, England.

Need for calendar reform has existed with me since my first important position as manager of the Los Angeles Clearing House. It was one of my duties to report every day, week and month a comparative analysis of the clearing dollar value of all member

banks. This was supposed to reflect where business was getting better or worse. You can readily understand the figures were worthless when two holidays sometimes occurred in one week and there were none in the same week the year before. If I can be of help, command me.—Frederick A. Sansome, New York City.

I am thoroughly convinced of the utility of The World Calendar.—Shri Kakasaheb Kalelkar, Member Council of States, New Delhi.

Progress is essential to our age, and The World Calendar is an obviously progressive idea.—John Grant Bickell, Educator, Wynnewood, Pa.

We are favorably impressed with the desirability of The World Calendar, thanks to its logical arrangement and regularity.—P. S. Willsallen, Woollahra, Australia.

This matter of calendar reform is an interesting idea that should develop.—Herbert A. Wilkinson, Chairman, Interdepartmental Committee on Foreign Travel, U. S. Department of Commerce, Washington, D. C.

It is an admirable campaign which The World Calendar Association is carrying on in an effort to bring calendar revision to a successful conclusion. It merits success. There must be no let-up in the task of educating the public and obtaining from the people their approval and support, so that government action will follow.—Prof. Jos. Girard, Paris.

Because I believe The World Calendar would put an end to a great deal of confusion, I strongly urge its adoption.—J. D. Humphrey, High School Prin., Balke, Okla.

In Great Britain there is a steady advance of support for calendar reform, and definite hope for a successful fruition.—W. F. Bushell, Birkenhead, England.

Our work for calendar reform is a useful type of education toward a more efficient civilization.—Guy W. Hayler, San Francisco.

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READING MATERIAL

The following material may be obtained on request from The World Calendar Association, 630 Fifth Avenue, New York 20, New York:

BOOKS

Of Time and the Calendar, by Elizabeth Achelis. New York 1955.

Time Counts, by Harold Watkins. London 1954.

Consider the Calendar, by Bhola Panth. New York 1944.

MONOGRAPHS AND PAMPHLETS

The World Calendar—Questions and Answers. A 16-page summary of the most significant questions concerning the value of The World Calendar and the prospects of its universal adoption.

The Present Calendar and Its Effects on American Business, by Professor John M. Firestone, College of the City of New York, in cooperation with the Controllers Institute of America.

Two Minutes of Employment Facts. Dominion Department of Labour, Ottawa, Canada.

Clarifying Calendar Reform, by Elisabeth Achelis.

Calendars Old and New, by Sir Harold Spencer Jones.

The World Calendar and Religion. The World Calendar Association, Inc.

Calendar Reform in India, by Professor M. N. Saha, F.R.S.

Israel's Calendar Confusions, by Sulamith Rogoff.

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A Reformed Calendar, by Lord Merthyr.

The Calendar, Past, Present, Future, by Sir Harold Spencer Jones.

Now Is the Time, by James Avery Joyce.

Calendar Reform and the Seven-Day Week, by Elisabeth Achelis, James Avery Joyce and Daniel Sher.

At Geneva 1954. The World Calendar Association presents its case.

Calendar Reform Before the United Nations:

1. Basic Facts: Essential Dates, Excerpts, References.
2. 1947 Memorandum by Secretary General Trygve Lie.
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6. Abridged Report of ECOSOC Discussion.

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March 1955

THE WORLD CALENDAR

1ST

QUARTER

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

2ND

QUARTER

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
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29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

3RD

QUARTER

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
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29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

4TH

QUARTER

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
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29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

W (Worldsday, a World Holiday) equals 31 December (365th day) and follows 30 December every year.

W (Leapyear Day, another World Holiday) equals 31 June and follows 30 June in leap years.

In this Improved Calendar:

- Every year is the same.
- The quarters are equal: each quarter has exactly 91 days, 13 weeks or 3 months; the four quarters are identical in form.
- Each month has 26 weekdays, plus Sundays.
- Each year begins on Sunday, 1 January; each working year begins on Monday, 2 January.
- Each quarter begins on Sunday, ends on Saturday.
- The calendar is stabilized and made perpetual by ending the year with a 365th day following 30 December each year. This additional day is dated "W," which equals 31 December, and called Worldsday, a year-end world holiday. Leap-year Day is similarly added at the end of the second quarter. It is likewise dated "W," which equals 31 June, and called Leapyear Day, another world holiday in leap years.

Journal of

CALENDAR REFORM

March 1955

VOLUME XXV

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Clarence R. Decker, Editor

Linda Halsted, Associate Editor

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"WITH YESTERDAY'S SEVN THOUSAND YEARS"

W Day, Right Now

(Cartoon by Fitzpatrick and editorial from the St. Louis Post-Dispatch 31 December 1954)

IF there were a well-ordered world, run according to a well-ordered calendar . . . this would be W Day. World'sday, that is.

The World Calendar sponsors hit upon this special occasion because they did not know what else to do with it. To make the year divisible into 52 weeks, they had to eliminate or account for that 365th day somehow. What to do with the odd day? There it was, like a sore thumb on a lovely hand. It could not be added, it could not be subtracted, so some imaginative soul decided that the thing to do was to observe it with a capital W.

We like this idea for several reasons. It fills a void. Moreover, it fills it nobly. The world does indeed need a day, a little 24-hour period when it can contemplate its worldliness, its indivisibility and, indeed, its general excellence. At least we do not know of any other planet so deserving of a day. . .

Our Gregorian calendar is far from ideal. Its irregularities, the wandering weekdays and the varying length of months, quarters and half-years, cause undeniable inconvenience.—*Carbondale (Pa.) News*.

Obviously a change to a calendar that will meet the needs of the modern world is very much past due. Let us then all give our support to the globe-wide adoption of The World Calendar, which will usher in a new era of harmony and usefulness, bringing with it a brighter, happier world of human brotherhood and understanding.—*Annales de Chronometrie, Besancon, France*

It is important that any plan for calendar reform be accepted by all civilized countries and introduced by all of them at the same time.—*Montreal Star*.

Split-week holidays cause considerable inconvenience to business firms, industries and individuals. We could avoid them by adopting The World Calendar.—*Transcript Norman, Okla.*

Our present calendar is decidedly wasteful and costly.—*Paterson (N. J.) News*.

Certainly the calendar can be improved.—*Ithaca (N. Y.) Journal*.

Advantages of The World Calendar are obvious. The plan is rapidly gaining widespread support.—*West Australian, Perth*.

All major Canadian labor organizations have approved the adoption of The World Calendar.—*Labour Gazette, Ottawa*.

The new calendar proposed at the U. N. makes more sense, speaking logically, than our present system. If promoted by the U. N. it has a good chance of being adopted by all countries.—*Sentinel, Keene, N. H.*

We are sympathetic with proposals at the U. N. for a new World Calendar more efficient than the 400-year-old system currently dividing the year into irregular months. The logic of the arrangement is obvious.—*Star-Telegram, Fort Worth, Tex.*

Irregularities and defects in the present calendar are the cause of much inconvenience to the business community as well as in normal civilian life.—*Los Angeles Times*.



Editorial

On Anniversaries

THIS year The World Calendar Association is 25 years old.

Perhaps the awareness of our own milestone makes us particularly conscious of the anniversaries of other institutions we have long admired for their contribution to the enrichment and enlargement of human life. We cannot mention them all, but we do congratulate a few as a general salute to all.

We think of the United Nations, this year celebrating its Tenth Anniversary. Born out of faith and necessity, it has weathered rough storms, achieving more victories than is commonly recognized and growing steadily wiser in the complex ways of the world.

We think of the Organization of American States, celebrating the 25th anniversary of Pan American Day, symbol of its hopes for the Americas. Its trials, too, have been great, but its triumphs in inter-governmental relationships are notable and reassuring.

We think of the 50th anniversary of Rotary International and its noble motto "Service Above Self."

In the publication field we think of two distinguished magazines. *Fortune* magazine celebrates its 25th year of significant contributions to a better understanding of the responsibilities and opportunities of our economic life. And the *New Yorker*, thirty years old, must take pride in the unique position it has won for itself as a national, even an international, journal of thoughtful humor—the "true humor," as Carlyle defines it, that "springs not more from the head than from the heart." This Association is particularly pleased about this anniversary because the *New Yorker* once published a "profile" of its president and has frequently publicized calendar revision.

Anniversaries call for reflection as well as celebration.

The World Calendar Association's thoughts turn inevitably to the May meeting of the United Nations' Economic and Social Council, when that agency resumes its deliberations on calendar revision. Here is the golden opportunity to achieve a

major advance in a long overdue reform. With vast research and a large body of opinion already available, the Council's proposed study of calendar revision can be so expedited that a recommendation could be submitted within a year to the governments of the world for ratification, leading to the universal adoption of a modern calendar in 1961. Such an achievement would be noteworthy in itself and, if accomplished "with the greatest possible speed," as urged by the Belgian National Committee on Astronomy, would increase the effectiveness of the United Nations as a workable and forward-looking agency of human welfare.

Inevitably there are obstacles. The greatest of these are apathy and timidity. The chief active opposition, according to the recent article, "Let's End Our Calendar Chaos," in the *Saturday Review* (condensed in the *Reader's Digest*), "comes from extremely orthodox groups," constituting, in the words of the official United Nations document prepared by Trygve Lie, "only a very small part of the population of the world."

Apathy, timidity and fear have long beset the human race. These forces opposed Standard Time, the International Date Line, railroads, even telephones. They opposed calendar reform in the days of the Ptolemys, Julius Caesar and Pope Gregory. But in the end prejudice was overcome and mankind moved ahead with its basic beliefs fortified and strengthened.

So it is today. The World Calendar Association, with its many friends and determined supporters throughout the world, celebrates its Anniversary in the knowledge that more than ever before thoughtful people, both in high governmental circles and in the common walks of life, recognize the necessity and inevitability of calendar reform—and that they are making their voices heard. The World Calendar Association is confident that the United Nations will signalize its Tenth Anniversary by advancing calendar revision among its other worthy projects, for it must know, as we all know, that to the believers, the doers, the ones who dare, belongs the victory.

"... So every step might well be judged according to whether it increases or decreases the element of fear in the world. If there is less fear then there is more reasoned thinking, there is more understanding."

—JAWAHARLAL NEHRU

For Calendar Revision

(Cleveland, Ohio, Plain Dealer)

SINCE proposing, a few weeks ago, that readers investigate the "World Calendar," with the hope of lining up support for the reform through their Congressmen, we have received some verbal and written objections. These fall principally in the following categories:

What's The World Calendar all about, anyway? Why change?

Why change when it would disrupt the religious observance of the "seventh day" as the Sabbath?

If it would help business comparisons and the individual's calculations, why hasn't there been more support for it?

How can we tell it isn't a Communist plot to put something over on us as another example of "one-worldism"?

To take these up in order:

The World Calendar would divide the year into quarters of 91 days, each quarter beginning on Sunday. The 365th day would be called World's Day and would not be considered a day of the week. Leap years' 366th day would be similarly created after 30 June. January, April, July and October, beginning the quarters, would have 31 days; all the other months, 30.

The advantages? It would aid your business planning, your budget and saving planning, would eliminate your dependence on having a printed calendar at your elbow for seeing what day of the week—say 4 July—will fall on. (Since 1 July is Sunday in The World Calendar, 4 July always is Wednesday.) With a moment's pencil work you can place any day of the year.

For business purposes, the advantages are many and economical. Schedules under the reformed calendar can be put on a permanent basis; quarters of one year can be quickly compared with another, where now a quarter might have 12, 13 or 14 Saturdays or Sundays.

On the religious objections, which have come mostly from orthodox groups, including the Jewish, the fact is that our present calendar is the result of many changes and no one knows whether the present Saturday was the original seventh day or not. Detailed answers to any religious objections are given in the September 1954 issue of the *Journal of Calendar Reform*.

Why haven't business groups recommended the change, if it would simplify their operations? Many have. The National Retail Dry Goods Association, at its convention in New York, urged adoption of The World Calendar. Attending were 5,500 retailers from all over the nation.

Finally, about that "Commie" plot notion: The person who devised the stabilizing feature of The World Calendar was a Roman Catholic priest, Abbé Marco Mastrofini. He published his proposal in 1834.

What the World Calendar Means to You

It's time to simplify

*New Year's always
comes on Sunday*



*July 4 falls on
Wednesday, but that
may be changed*

*Friday the 13th comes
four times a year*

April now has 31 days

JANUARY · APRIL · JULY · OCTOBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

FEBRUARY · MAY · AUGUST · NOVEMBER

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

MARCH · JUNE · SEPTEMBER · DECEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

*Thanksgiving is Nov. 23,
now and forever*

*Feb. 13 may become a
new holiday in place of
both Feb. 12 and Feb. 22*

*Memorial Day may
wind up on May 27*

*February gets 30 days;
May and August each
lose one*

*Labor Day settles down
on Sept. 4*

*This your birthday?
You'll always celebrate
on Wednesday*

*Christmas comes but
once a year,
always on Monday*

*Happy Worldaday! In Leap Year,
there's another one at the end of June*

Life! The world may adopt a

NEW CALENDAR IN 1961

If everybody can agree on its dates, it may serve as one of several new tools to help nations work more closely together

By Edward D. Fales Jr.

From Popular Science Monthly, January 1955

TAKE a good long look at your shiny new 1955 calendar! You may not see many more like it. The months may soon be streamlined.

Just six New Year's Days from now you may nail up a calendar that you'll never have to change (unless you tire of the picture). The dates will always stay the same.

By 1961, if a move now under way succeeds, you'll have what is called a world calendar." Among other novelties, it will give you an extra holiday between Christmas and New Year's.

The World Calendar is just one attack in a vast new drive for *new tools to pull the world closer together*.

Our best brains are trying to comb out tangles and delays—and to give a jet assist to learning. The reason is simple, and deadly important. It's to keep us from being overwhelmed by our own progress!

Not only your calendars but your speech, spelling, reading and travel may be affected. And so, too, your food and drink. Already one big U. S. company has an "international recipe bureau" at work in Paris pumping foreign recipes into our wife's kitchen—and your wife's recipes into foreign kitchens.

It's natural that they've had a ground

crew at work on the calendar. It has been limping along on only three jets for some time.

Remember the first rule you learned in math? "Halves are always equal!" Yet our calendar year, which is one of the tap roots of our whole measurement system, has halves like a lopsided hamburger. One is bigger than the other. From January to July is 181 days; but from July to January is 184.

This World Calendar, which would correct that fault, is a U. S. project backed by a lot of businessmen. But the idea caught on in India, which is cursed with several calendars, and now India has put it up to the U.N. The U.N.'s Economic & Social Council has approved it—and now wants to know if Washington and 84 other capitals will buy the idea. If so . . .

The year gets four shiny new quarters of 91 days.

Your birthday and all other dates will *always* fall on the same day of the week.

New Year's will always be Sunday, Christmas Monday.

The Fourth of July will always come on Wednesday.

And for the first time, a Sunday will no longer follow Saturday! This will happen once a year. The 31st of December,

which is the troublesome 365th day, will be wiped right off the calendar. And in its place will come "Worldsday." Since 30 December will always be a Saturday, "Worldsday" will be tucked right in between Saturday and Sunday.

Once every four years there'll be another holiday—"World Leapyear Day"—tucked in between Saturday, 30 June, and Sunday, 1 July.

Back of these date changes are two headaches:

1. *Our years are too long*, by roughly a day and a quarter. Just try to divide $365\frac{1}{4}$ by anything! Calendar makers have a job like fitting a 1-inch bolt into a .99-inch hole. It can be done, but something has to give. And so—

2. *We get "grasshopper days."* Thanksgiving hops all over late November. Labor Day leapfrogs between 1 and 7 September.

"Timetable" mixups in business, schools, sales, paychecks, and world statistics will be eliminated by the inclusion of Worldsdays. But there's a bigger reason than that, claims The World Calendar Association of Rockefeller Center, New York, for such days. It's world friendship. They say that people who keep the same holidays feel more kindly toward each other.

If calendars can help pull the world together, so can *words*. In Calcutta not long ago an American made a speech on Freedom. But it didn't go over. To his listeners Freedom meant freedom from *desire*.

Today International Business Machines has a machine which may help out. You put in a message in Russian or French—and out it comes in good old U. S. English. You have to tag three bases:

1. The other day, the UNESCO *Courier* reported, someone put in a French message that said:

"Il n'est pas étonnant de constater que les hormones de croissance agissent sur certains especs . . ."

2. The machine spouted out this, in type:

"Not is not astonish of establish that/ which? hormones of growth act on certain species . . ."

3. Then a typist (who didn't know French) polished it up:

"It is not surprising to learn that growth hormones may act on certain species . . ."

But of course you aren't going to haul along an IBM machine to talk for you on your next canoe trip up the Amazon. So what then?

Esperanto won't help unless you find some scholarly natives. Nor will Interlingua. These "universal" languages are based on roots that the jungle tribes never heard.

But there is one simple language the world has largely overlooked. You see it every time you drive your automobile. It's *sign language*.

People have tried all kinds of languages (even gesture language that includes wiggling your ears).

But a simple way of talking with those Amazon tribes might be with a pencil and pad—*provided you both had a little sign schooling*. (Even "natives" are going to school nowadays.)

In China, nobody knows all the dialects. But you can talk with other Chinese by writing. There's no mistaking a river when it looks something like this: ㄚ

Or house: ㄣ

It's not much of a jump from that to

these, when you see them on a road in any country:



Thus road signs are becoming an international picture language.

Understanding these sign-words is one thing, but saying them is another. It may be centuries, some linguists believe, before we speak a common tongue.

One trouble is: we can't all even make the same sounds! Stick your fingers in your ears and make an "sss" sound. Now make a "zzz" sound. Hear the throat-buzz you've added? Well, a South German can't make that buzzing. He's never had to learn how.

Short-circuit No. 2 is: we don't even think the same. Suppose someone asks you, "Have you never been to the North Pole?"

In America you say, "No."

But in Thailand and some other countries you say, "Yes!" (Yes, you've never been to the North Pole.)

How can the world live with itself when "no" means "yes"?

The third big problem is this: everybody talks differently every day. It's hard to shoe a horse if he won't stand still. And your language is like a horse. How can people learn to talk like you if you change sounds every time you open your mouth? Nobody knows why this happens, but there are machines now that can measure it. A few years ago you said "secretary." Now, even if you pride yourself on correct speech, you say "seketary" oftener than you think. Some day it may be "sektary."

To get at such problems, linguists are now trying to split the atoms of your speech. Some day these "nuclear linguists" may know more about why you say "glass of beer" and a South German says "class of peer." When we get that far we may be on the way toward a world tongue.

Until then, Columbia's Dr. Eugene Dorfman thinks the best idea—to help world understanding—is for us all to learn two or three foreign tongues.

And uv kourz, there's always simplified spelling. You haven't bin hearing much about it lately, but the spark goze on.

It may come, in time. In fact it's already sneaking up on us. You can't hurry it. Back in 1906 Teddy Roosevelt tried to jam through 300 changes in Government spelling. He wanted *harbour* shortened to *harbor*, and *though* spelt *tho*.

An outraged Congress rebelled.

But do you know what has happened? Today the dictionaries have adopted 150 of those spellings. You've adopted them too. Today, who writes *harbour* for *harbor*?

And so some experts think it's time to fix up another list.

But in the meantime

SEE WHAT'S HAPPENING

to reading!

Just between us, your family doctor is in trouble. So are docs in England, Pakistan, Russia and Uganda. They can't keep up to date because they're swamped with reading. New developments come every day. It's true of your lawyer, your G man, your kids. Even your wife—all those new household ideas to read!

So now

they're teaching

people like us

To read faster

BY GROUPING OUR WORDS

in bunches.

This kind of thing is called "idea grouping." But there's an even faster way:

This kind of reading	is called "square span"	because it lets your eyes
work rapidly in squares	rather than single lines.	They can work up and down
as well as sidewise.	And so they take in more	at a single glance.

New devices of this sort, says Director Ken P. Baldridge of New York's Reading Laboratory, can speed up the world's reading by 50 per cent. Today they're even teaching bank clerks to read checks faster!

All these things—and others to come—are newcomers in a speed-up-and-standardize process that began long before calendars.

You can trace it all back to the day Joe

Caveman's wife borrowed a new recipe from Aunt Jennie Stoneage who lived in a hole on the other side of the cliff. Mrs. C. liked the new recipe better. It was quicker. The neighbors liked it, too. Soon the whole cliff was using it.

Presto—*standardization!*

You may—or may not—like all this standardization. World friends or not, maybe you don't *want* your birthday all ways on Tuesday, or the Fourth of July on Wednesday!

Maybe you *like* variety—and a little uncertainty. If so, you're no different from a lot of other normal people. Yes, the weight of history has always been in favor of standardization.

And the weight of dollars and cents, too. As long as we like to eat three times a day, economic pressure for standardization will go on.

After all, isn't *three meals a day*—by any calendar—the granddaddy of all standards?

Plump for An Up-To-Date Calendar

By PETER FREEMAN, M.P.

(From World Calendar News, Bulletin of the British Section of The World Calendar Assn. Int'l)

"THE next programme will be on Wednesday, November 31st." This was an official announcement made on the B. B. C. recently, and everybody roared with laughter, and the apology followed! But what is surprising is not the incongruity of the statement, but the fact that we have put up with such uncertainties and inconveniences for so long.

The World Calendar would regularize the whole position. We should know that the 15th of February would be a Wednesday every year. We should not have a different number of days in each Quarter, finishing at awkward and odd times. We should be able to carry in our minds with the least effort when any day of the year would come, and know whether it would be a Tuesday or a Friday without having to look it up in a new diary every time.

It would save hours of time, endless annoyance and a waste of energy that is at present being dissipated in trying to fit in with the most ridiculous system of time that it is possible to conceive.

Plump for The World Calendar!

PROFITS FROM A BETTER CALENDAR

A Business-Industry Study

By Walter Mitchell, Jr.

Walter Mitchell, Jr., consultant in the field of Management Planning and Economic Analysis, is widely known among financial and general management executives. He was for five years managing director of the Controllers Institute, a professional organization of financial officers, representing about three thousand of the country's largest and best managed business organizations. Prior to that he was for eleven years with Dun & Bradstreet, Inc., as Director of Business Surveys and later as Assistant to the President.

INTRODUCTION

THE first reaction of a person confronted with a proposal to stabilize the calendar is usually "why bother?" Certainly no one wants to make a change just for the sake of change. There must be a good reason in human values. This study shows how we could save substantial sums and simplify our lives by the world-wide adoption of a modern stable calendar.

Politically within Our Reach

The World Calendar has long appealed to many individuals and organizations as the best available solution of a complex problem, but it has also seemed less of a political possibility than a sound theory. Since July 28, 1954, however, calendar reform has come within our reach. On that date the Economic and Social Council of the United Nations unanimously adopted a Resolution, introduced by India, asking all Governments to "furnish their views . . . on the desirability of calendar reform."

Ability to Measure Things

Former President James Bryant Conant of Harvard University and many other eminent scientists have pointed out that much of human progress has been intimately related to man's ability to measure things. Real progress in chemistry depends upon methods of measuring weight and volume. Many developments in machinery have had to wait upon precision measurement. The vast development and future potential of electronics is tied intimately to the refinement of measuring devices. Similarly, an improvement in our method of measuring time would contribute impressively to our economic and social progress.

Planning in a 364-Day Cycle

From a businessman's point of view, what does The World Calendar mean?

Perhaps one of the most significant things is the curious fact that a year of 365 days is divisible only by 5, not much help in business scheduling. In contrast,

the proposed 364-day operating cycle of The World Calendar is divisible by 2, 4, 7, 13, 14, 26, 28, 52, 91 and 182. It can be divided into equal halves and into 4 equal quarters of 91 days (13 weeks) each; it encompasses exactly 52 weeks of 7 days each; it can be divided into 13 equal accounting periods of 28 days each and it brings 26 fortnightly payrolls per annum exactly into step with the tax year for those who—like the Federal Government—pay on that basis.

No other number between 0 and 364 is divisible by all of these operating periods. When these mathematical facts are contemplated in the light of the scheduling, accounting and other requirements of business, it would almost appear that some deep-rooted natural law pointed toward the proposed stabilization plan. Although astronomers have long been bothered by the fact that the world did not circle the sun in some exact multiple of our customary week or day, the circuit of the sun comes within thirty-hours—or within three-tenths of one per cent—of coinciding with this almost magic number of 364 days that fits so well into man's living habits and business needs.

Long Week-Ends

In gathering data regarding the potential savings that would accrue from a stabilized calendar, it is assumed that most holidays would tend to move to week-end positions, preferably Mondays. This shift would follow inevitably once the calendar was stabilized because the advantages would become far more apparent to employers and employees than they are under the present calendar. Further, it would happen extensively on a voluntary basis, by union contracts and

other agreements between employers and employees—before legislation was actually developed to cover the matter.

We already have a widespread custom of working on Columbus Day and Veterans Day—even in cities or states where these are legal holidays—and in return giving employees the Friday after Thanksgiving so as to produce a 4-day week-end. We also have the fact that Daylight Time, first hesitantly adopted in a few areas, has now become almost universal.

Holiday Shifts Now Difficult

In this connection, the comments of employers indicate that very little success in pushing holidays into week-end positions can be expected under the present calendar. Vigorous and prolonged efforts by various interested groups, such as the National Association of Travel Organizations, have yielded little result in the past. The most conspicuous exception is the one noted above, and it gives a triple clue to the difficulties now confronting all such efforts.

Most of us remember the confusion and bitter dispute generated by the effort to shift Thanksgiving from the traditional "last Thursday in November" to the "next to last Thursday" and, finally to the present "fourth Thursday in November." The longer average shopping period between Thanksgiving and Christmas has proved so satisfactory to customers and stores that few would think of returning to the former arrangement.

But employers have noted the difficulties. They indicate several reasons for hesitating to bargain collectively with a union about other holidays. For one thing, exact description is awkward—it is more cumbersome to write the 4th Mon-

day in March than March 25. *Further, holiday shifts to week-ends in the present calendar would cause the holiday to fall on different dates each year.*

Secondly, a bargain affecting the Friday after Thanksgiving and Veterans Day robs no employee of the opportunity to celebrate a cherished family feast with his relatives; but an employer who proposed independently to substitute Monday, December 30, for Thursday the 25th would certainly meet with rebellion from employees whose relatives had the 25th off-duty.

Thirdly, the best issue for bargaining is one that has equal value every year, and the calendar-crawlers among our holidays obviously do not. On the average, such a holiday falls as often on Friday, Sunday, or Monday as it does on Tuesday, Wednesday or Thursday (holidays on Saturdays have pros and cons that are difficult to analyze in this connection and probably balance out). About half the time the crawling holiday yields a long week-end and is satisfactory to employees. The mid-week shutdown may cost the employer a considerable sum in the remaining three days (as is shown later in this report), but it is not enough to justify the risk of upsetting negotiations involving far larger sums.

With a stabilized calendar these difficulties would be absent or greatly diminished. And it must be remembered that in many parts of the country union negotiations are a major factor in setting employment practices. On this account the above findings lead to the conclusion that the prospect for stabilized holidays should be given an important, if not major, place in any study of the calendar problem in business management.

Story of Standard Time Belts

The story of Standard Time provides a particularly instructive analogy. Before the days of railroads, there was little need for Standard Time. Each town set its clocks by some local source such as a jeweler's chronometer (and the jewelers seldom agreed on the same time) or a retired sea captain's sightings on the sun. The resulting confusion has been described as follows:

The railroads found it difficult to operate on anything resembling a schedule. At noon, sun time, in Chicago it was 12:31 in Pittsburgh, 12:24 in Cleveland, 11:50 in St. Louis and 11:27 in Omaha. There were some twenty-seven local times in Michigan, thirty-eight in Wisconsin, twenty-seven in Illinois and twenty-three in Indiana.

In Pittsburgh railroads used no less than six standards of time for the arrival and departure of trains. In the Buffalo station there were three clocks, each with a different time for different trains. It has been estimated that in 1883 there were about a hundred different time zones operating in the country, none of which was clearly definable. The railroads alone operated under sixty-eight local times.*

The railroads soon found it could be embarrassing to operate without some standard of time, particularly when it was necessary to run trains in both directions on the same track. Thus on Sunday, November 11, 1883, Standard Time was put into effect by the railroads.

Although there was some objection on religious and political grounds, most people liked the idea and found it practical. State legislatures soon began to legalize the new time, but Federal action lagged for thirty-five years—until March 19, 1918.

*"A Tale of Time," by Frank L. Remington, *Think* (October 1954).

Incidentally this history points a danger in one viewpoint that has been expressed recently: namely that the United States should take no interest in the calendar discussion at the United Nations until there is a strong popular domestic demand for a change. If Standard Time had been required to await that signal, it is anybody's guess how many unnecessary rail-collision mortalities and how many years of delay would have passed before anything was done. We might well recall the adage that "the best place to start work is where you are."

Why Action Has Lagged

The cases cited point up the difficulty which confronts the proposal for a better calendar: the savings are relatively small for most individual organizations. Although some executives have interested themselves in the problem as a hobby, individual management is hardly justified in giving much time to the problem except as a public service. Nonetheless, the large savings that can accrue to business generally and the nation as a whole suggest that calendar revision is an urgent matter for consideration by business organizations and government on the national level and through international bodies such as the United Nations.

Difficulty of Measurement

Although opinions in favor of an orderly stabilized calendar are numerous, the number of business enterprises that have actually analyzed the effect of the calendar on their operations is extremely limited. This in itself is evidence that the calendar imposes difficulties on the analytical and planning function of management. Businessmen say, "Oh, yes, there is undoubtedly loss or confusion resulting from the irregular number of working days in various time-period comparisons, but how can we measure the cost?"

It has been necessary to query many organizations in order to find a few in possession of usable figures, and it has required intensive conferences with production men, controllers and accountants to devise methods of measuring the effect.

An orderly calendar could eliminate several hundred million dollars worth of waste per annum. This may seem small in a country whose gross national product runs to hundreds of billions of dollars, but surely we as a nation are not yet disposed to ignore the opportunity to divert several hundred million dollars of waste into more profitable and useful channels, particularly when it can be done without damage to anyone's rights or prosperity and without violence to traditions.

SECTION A—RECORDING AND PLANNING PROBLEMS

Every business enterprise must keep records—at least of such fundamentals as sales, purchases, receipts, expenditures. They are needed for three purposes: (1) to permit owners and creditors to appraise the results, (2) to enable the tax collector to check tax computations, (3) to give management a basis for planning.

The second and third of these purposes would be better served under a stabilized calendar, as shown by the histories below. As to item 1, the calendar has relatively little bearing on reports to owners, since quarter-years and whole years may be compared with each other reasonably well under the Gregorian calendar.

Tax Computation

However the calendar still has a bearing on tax planning and computation. All companies that keep records in multiples of weekly units (13-period accounting and the 5-4-4 system) find they get gradually out of step with their taxable year. This is not an insuperable difficulty under the revised and more understanding tax law now in effect, but it still means that every fifth or sixth tax year must contain a 53d week. Comparisons with 52-week years can therefore be at least 2 per cent confusing.

Accounting Calendars

The principal difficulty with the calendar occurs when past records are used for planning purposes—as a basis for decisions about the future.

This difficulty has led to all sorts of experiments. In an effort to make a comparison and analysis more accurate, some companies maintain an accounting calendar of thirteen periods, each containing four weeks. Others pursue a system of accounting units, five weeks, four weeks, and four weeks in length, making a thirteen-week quarter-year. Package Machinery Company of East Longmeadow, Massachusetts, after experimenting with various of these alternatives, is now trying out an accounting cycle comprising ten periods of five weeks each, plus a two-week shutdown for vacations, to come out with a total of 52 weeks.

International Harvester Company, Chicago, reports the following interesting history of their accounting calendars:

- (1) 1930 and prior years used Gregorian calendar;
- (2) 1931 through 1946 used thirteen-period calendar;

- (3) 1945 the thirteen-period calendar was revised so the work-week would begin on Monday and end on Sunday;

- (4) 1947 and subsequent, the present type factory calendar substituted for the thirteen-period calendar (A quarter-year of 13 weeks—the 5-4-4 plan).

Omar Incorporated, of Omaha, Nebraska, chain bakery operators, described the difficulties of record keeping under the present calendar, as follows:

The baking business lends itself probably to the greatest amount of statistical information, and yet the information which can be compiled can be used economically. Insofar as I know, all of the companies in the baking industry are on a 13-month, 4-week period for fiscal purposes. We, too, are on that basis, but we carry it even further. While we compile information once every four weeks similar to what all the other baking companies do, in addition we compile figures weekly which are comparable to the monthly figures of other companies. In other words, each week we know just exactly down to the final profit or loss how much we made in each one of our units of operation. Since our sales are very sensitive to consumer reaction, we want to compare the same number of days each week with every other week, and it is especially important from that standpoint.

Thus it may be seen that no system is completely satisfactory under the present calendar. Accountants are continually searching for better solutions and experimenting with various types of operating calendars.

The proposed World Calendar would keep any and all of these special accounting procedures in step with the taxable and calendar year. It would eliminate the necessity now confronting all "week-unit" procedures: the insertion of a confusing 53d week every fifth or sixth year.

Small Enterprises

For those many small enterprises who pursue an ordinary calendar month basis of accounting, the important problem is to be able to look back and determine how the history of the business tied in with outside events. Good planning is based on a knowledge of what is likely to happen under given circumstances. Was the difference in sales volume between January this year and January a year earlier a matter of weather conditions, business trends, or other factors? That can best be answered if January in each year has the same number of working days and if the same number of payrolls fall in both Januarys. Much of the time this is not true—especially when five payrolls fall in January in one year and only four the next. The businessman has the choice of two solutions—either to adjust his figures or to adjust his thinking. Otherwise his planning may be misled by perfectly honest figures.

Adjusting Weekly Payrolls to Monthly Accounting

Harshaw Chemical Company of Cleveland, Ohio, has a weekly payroll for factory employees, and semi-monthly payroll for office and sales help. The weekly and semi-monthly payrolls conflict occasionally under a rotating calendar, with the result that there is sometimes about 25 hours of overtime required in the accounting department to get both payrolls out on time. This could be eliminated by a careful and standardized scheduling under a stabilized calendar.

The Finishes Division of Interchemical Corporation at Cincinnati pays hourly employees weekly but makes adjustments

quarterly for the broken weeks in order to produce a quarterly operating statement. The adjustments in costs and earnings data, caused by the irregularities of the present calendar, amount to about eight clerk days per year that would be eliminated under a stable calendar.

Montana Power Company of Butte, Montana, has monthly, semi-monthly, bi-weekly, and weekly payrolls. They have some round-the-clock operations, some people on a five-day week, swing shifts, shift differentials, and holiday complications. Despite careful scheduling and the making of new detailed schedules every year, new complications and headaches continually crop up. They believe that the various accruals and adjustments involved in handling these records would become simpler, and eventually standardized, if the relation between the weeks, months, and years did not change.

The Quaker Oats Company pays its factory employees weekly and makes adjustments in every month where the work-week does not match joints with the end of the month. A calendar that would standardize these adjustments and always match joints at the quarter-year would save labor and increase accuracy of comparisons.

Kaiser Aluminum & Chemical Corporation finds that the adjustments to fit a weekly payroll into monthly operating brackets are a nuisance under the present calendar because productivity per man hour is higher in the middle of the week than at either end of the week (see Charts IV-X), yet the rate of pay per hour is the same. Adjustments on the basis of the number of hours of plant operation are the simplest solution and therefore are used. But this distorts costs.

I.ADJUSTING WEEKLY PAYROLL TO CALENDAR MONTH
1955 - OLD CALENDAR
(5 PATTERNS OF ADJUSTMENT)

Days in
Broken
Week

											Week
JAN.	1 ?	2	8	9	15	16	22	23	29	30,1	2
FEB.		1	5	6	12	13	19	20	26	27,8	2
MAR.		1	5	6	12	13	19	20	26	27... 31	5
APR.	1,2	3	9	10	16	17	23	24	30		0
MAY		1	7	8	14	15	21	22	28	29,31	3
JUNE		1	4	5	11	12	18	19	25	26... 30	5
JULY	1,2	3	9	10	16	17	23	24	30	31 ?	1
AUG.		1	6	7	13	14	20	21	27	28... 31	4
SEPT.	1,2,3	4	10	11	17	18	24	25	30	?	1
OCT.	?	2	8	9	15	16	22	23	29	30,1	2
NOV.		1	5	6	12	13	19	20	26	27... 30	4
DEC.	1,2,3	4	10	11	17	18	24	25	31		0

STANDARD QUARTER - EVERY YEAR - WORLD CALENDAR
(2 PATTERNS OF ADJUSTMENT)

JAN.	1	7	8	14	15	21	22	28	29,31	3	
FEB.		1	4	5	11	12	18	19	25	26... 30	5
MAR.	1,2	3	9	10	16	17	23	24	30		0

This same standard quarter year would repeat without change
in the other three quarters.

 Necessary Adjustment
 Possible Adjustment

Chart I shows the five different types of adjustments needed to bring weekly payrolls in line with monthly data during 1955. These five different adjustments will occur in almost any other year under the present calendar—but in a differing sequence. By contrast, only two types of adjustment would be needed under The World Calendar—covering the first and second months in each quarter-year; the third month in each quarter ends in step with the week; the same pattern repeats every quarter. It would appear that the process of adjustment could become highly standardized.

Retail Store Operations

An important factor in successful retailing is accurate planning—so that promotion effort is expended when it brings best results, merchandise is on hand at the time the customers want it, and the clerk power behind the counter is neither too large nor too small.

Inescapable variables, such as weather and business conditions, make this problem difficult enough, without the benefit of man-made obfuscation provided in a crawling calendar. The J. L. Hudson Company, Detroit department store, offers this example:

Mondays and Saturdays are the most important days in the retail selling week. But the 1st and 16th of the month are days to watch also, because so many employees are paid twice a month.

Note how this affects our effort to compare December business in 1953 versus 1954 as a means of appraising and improving our Christmas holiday planning. Our December 1954 sales total noticeably exceeds December 1953. But Friday, December 24, 1954, was 43 per cent lower in sales volume than Tuesday, December 1, 1953, which is the shopping day that it replaces in our thinking—under the present calendar. (The

remainder of these two Decembers contains identical assortments of weekdays and pay days.) So what do the sales figures really mean, when we try to appraise our performance? What we would like to know, and can't determine clearly, is the degree of difference caused by public buying power and attitudes, and the proportion caused by the calendar.

January 1955 will have Monday the 31st—when many customers are short of cash—replacing Saturday the 2d in 1954. Whereas a Saturday directly following a semi-monthly pay day is ordinarily a good combination, New Year's eve celebrations tend to absorb cash. So what will the January comparison really mean?

Gimbel Brothers, Philadelphia, says:

Our interest in The World Calendar is strictly a selfish one because of the fact that its adoption would simplify and unify the operation of department stores throughout the world. It would tend towards making our planning more intelligent and bringing about greater uniformity in our operations—which would ultimately result in expense savings. Such economies, of course, would be passed along to the consumer in the form of lower prices. Our company policy makes it clear that we have only one boss—the customer; and, thus, we believe, that the adoption of The World Calendar would please the “boss.”

The thinking of department store executives is crystallized in resolutions passed by the Controllers' Congress of the National Retail Dry Goods Association in June 1947 and by the entire Association in 1951 and again in 1955, when the Association urged that The World Calendar be established by the United Nations because it would be “generally beneficial.”

“Cycle Billing”

In order to facilitate the billing of a large number of accounts, many public utilities, department stores and other organizations with large customer lists have

II. STANDARD SCHEDULE FOR CYCLE BILLING BY A PUBLIC UTILITY UNDER THE PROPOSED WORLD CALENDAR (FOR FIVE DAY WEEK)

(a)
 DATES OF WORKING DAYS

JAN., APR., JULY, OCT.	2	3	4	5	6	9	10	11	12	13,	16	17	18	19	20,	23	24	25	26	27,	30	31
FEB., MAY, AUG., NOV.	1	2	3,	6	7	8	9	10,	13	14	15	16	17,	20	21	22	23	24,	27	28	29	30
MAR., JUNE, SEPT., DEC.	1,	4	5	6	7	8,	11	12	13	14	15,	18	19	20	21	22,	25	26	27	28	29	

DISTRIBUTION OF ALPHABET
 (For 21.6 working days)

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z

(a) No provisions for holidays

Copyright 1955, Walter Mitchell Jr.
 Prepared for World Calendar Association

adopted the principle of "cycle billing." Instead of the time-honored practice of billing all customers at the end of the month, the invoicing clerks or automatic computing machines are kept busy throughout the month, with certain parts of the alphabetical customer list assigned to each working day of the month. This needs to be re-scheduled every year if the billing department is to avoid over-staffing the operation with resultant idle-time loss or under-staffing with a resultant overtime cost.

Chart II portrays a standard quarter-year "cycle billing" schedule for a public utility company under a typical distribution of the alphabet involving household and corporate customers. With the exception of the necessary provision for holidays, this schedule could remain standard procedure for each quarter-year under the proposed calendar.

American Bakeries Company calls attention to the scheduling problem for an organization attempting household delivery of fresh-baked goods. A calendar change that would eliminate wandering holidays, and offer standard quarter-years of exactly 13 weeks, should result in greater efficiency of scheduling.

Cash Discounts, Interest and Dividend Problems

The Frederick and Nelson Department Store in Seattle calls attention to the necessity for very careful scheduling in the handling of payables in order to take advantage of the discount dates, since cash discounts are an important factor in the net profits of department store operation. In fact J. L. Hudson Company, Detroit, observes: "You very probably know that in many years a department

store does well to make its cash discounts the net earnings (after applying taxes to total earnings including cash discounts)." This schedule for handling payables has to be reviewed every year but could be standardized under a stable calendar.

Computation of interest in commercial banks would not be greatly affected by the proposed calendar change. Although the first half of our present year has 181 days and the second half 184, banks and borrowers appear to be agreed by long-standing custom on a convention that considers each month as 30 days, each quarter 90 days, and a year as 360 days. Thus the borrower who is able and willing to purchase his money "wholesale," a year at a time, has a slight advantage over the borrower at "retail" from whom a year's interest is earned in 360 days, but with considerable added clerical work on the part of the bank.

Whether the proposed Worldsdays should be considered as an interest-bearing day by banks is a point that would presumably have proper study by the American Bankers Association and bank supervisors in the event that such a calendar is adopted.

Payment of quarterly dividends by corporations would obviously be simplified. For example, a company that tries to issue a dividend about the middle of December every year would find that December 15 falls always on a Friday, as does the 15th of March, June, and September. This in turn means a simplification of the schedule of work in the Corporate Trust departments of banks, where the dividend disbursements of many large corporations are handled.

In a number of large corporate families the parent company acts as banker for

operating units. A comment from International Harvester Company shows how the calendar relates to this problem:

One of the governing factors in the use of cash resources is the knowledge of availability. This information is usually determined through the medium of advices of deposit mailed to the treasurer's office from the location at which the cash was received. The receipt of such information during the weeks in which a holiday does not occur is such that plans can be made and followed to utilize cash to the best financial advantage. However, when there is a general observance of a holiday during the week, especially on a Wednesday or Thursday, the receipt of data regarding availability of cash is disrupted and delayed, thereby causing the possibility of loss of income on investment or an added amount of interest payable on loans.

Cost of Executive Time

One very important factor is difficult to reduce to dollars, but is repeatedly mentioned by planning and financial executives. Allis-Chalmers Manufacturing Company of Milwaukee comments: "A stabilized calendar would be valuable in historical reporting of results, in that sales earnings, etc., would be compared to periods of equal lengths."

Pabco Products Inc., San Francisco, makers of hard surface floor covering and paint, mentions that whenever executives gather to plan for the future they examine past records of sales and almost invariably someone says, "But remember that month only had four Saturdays last year and it will have five this year"; or remembers some difference in holidays that may have affected production. Often debate ensues as to the relative significance of the point and a considerable amount of high-priced time is consumed. This need not happen under a stabilized calendar.

Montana Power Company of Butte, Montana, suggests that their forward estimates of revenues, expenses, and earnings—made up for weeks, months and longer periods—would become more accurate if the past accounting period always contained the same combination of working days, week-ends, and holidays.

Harshaw Chemical Company, who must plan a complicated process of producing hundreds of different kinds of chemicals, inevitably refers to their past experience in working out schedules. They find that the necessary caution in the interpretation of past shipment figures under the present calendar wastes executive time in their planning conferences.

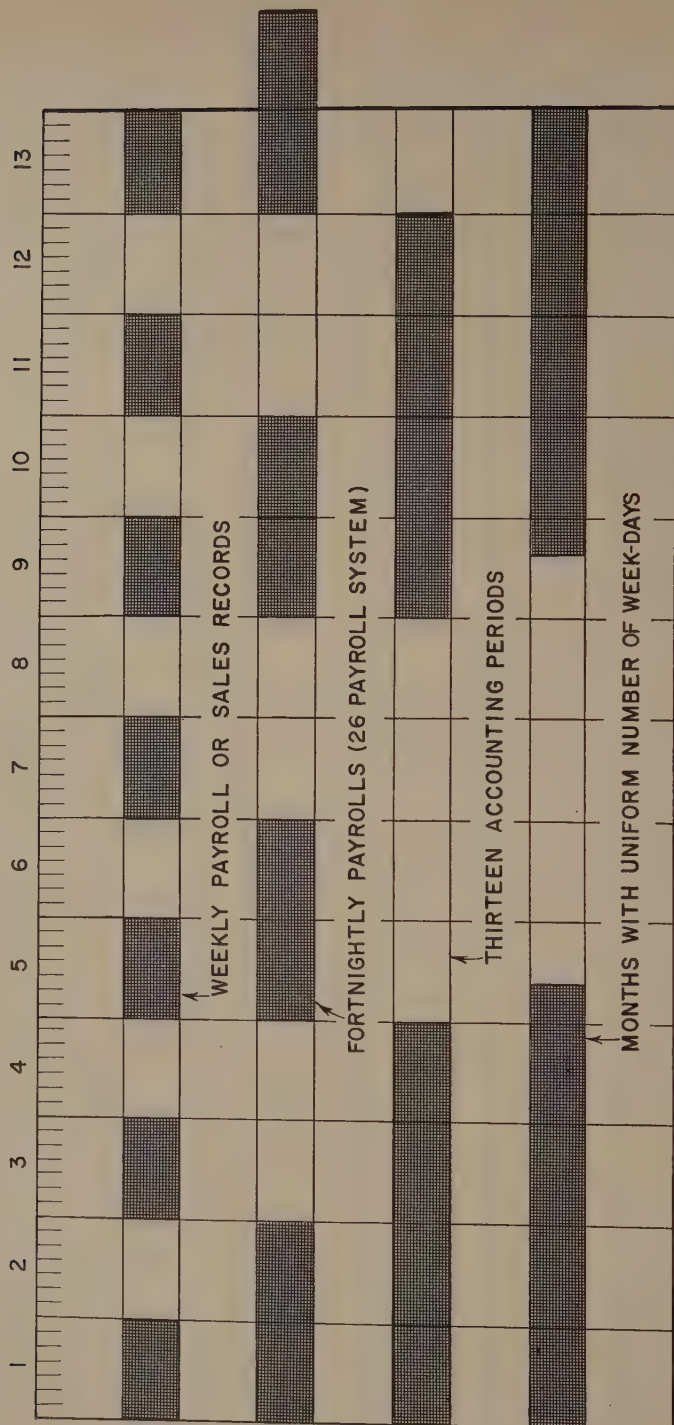
Summary of Accounting Problems

Almost without exception the financial record and planning problems of business could be simplified under a stable calendar. One of the few companies that had occasion to study the problem in some detail is Lockheed Aircraft, which now pays all employees—from the Chairman of the Board to sweepers in the factory—on a weekly basis. It simplifies the payroll operation.

Although the tax law now permits reporting of a fiscal period for an even number of weeks, even if it does not begin or end exactly in step with the calendar year, the Lockheed Management feels it is better to make the accruals and adjustments necessary to report corporation earnings and taxes on a flat calendar year. They estimate that these closing operations and adjustments for all the company's divisions and subsidiaries cost about \$100,000 a year. Under a calendar containing exactly 52 weeks and involving a minimum of internal adjust-

III. FIRST QUARTER OF EACH YEAR UNDER PROPOSED WORLD CALENDAR

EXACTLY 13 WEEKS, OR 91 DAYS



(Other quarters similar - complete year exactly coincides with 13 accounting periods of 28 days, or 364 days)

Copyright 1955, Walter Mitchell Jr.

Prepared for World Calendar Association

nents, they believe a substantial part—perhaps a quarter—of this cost could be saved after a year or two of experiment.

California Packing Corp., of San Francisco, canners of Del Monte fruits and vegetables, estimate that at least one or two clerks could be saved in their accounting operation under a stabilized calendar by reason of simplified accruals and scheduling.

Langendorf United Bakeries, Inc., with plants in eight West Coast cities from Seattle to Los Angeles, operates on the basis of four quarters of 13 weeks each, which do not exactly coincide with the present calendar but would match The World Calendar quarters. They point out:

Under this arrangement it is necessary, of course, to toss in an extra week every

five years or so in order that the fiscal year-end does not get too far away from the end of the calendar year or, for companies who close mid-year, from June 30. This results in occasionally having a fiscal year which is not comparable to other fiscal years from a time standpoint . . .

Chart III shows a typical quarter-year under the proposed World Calendar and the relationship between such a quarter and the various accounting periods commonly in use in the conduct of business.

A stabilized calendar on the equal quarter basis facilitates the computations for accountants and statisticians in that all the calendar-units agree at the end of every quarter-year and the year itself. This is made possible because the 365th day is made a holiday and placed between two weeks—the last and first weeks of the old and new years.

SECTION B—HOW THE CALENDAR AFFECTS PRODUCTION

The calendar's characteristics bear upon both the planning of production and the productivity achieved.

Obviously it is difficult to measure the effectiveness of management's planning function. Many factors are involved. Who can say for sure how much profit a given enterprise would have made if the planning had been better? Consequently, this phase must be measured largely in terms of case examples.

The effect of the calendar on productivity, however, can be measured in terms of dollars, kilowatt hours, or other units.

The discussion that follows will be found to conform largely to these two patterns—case examples and specific data.

Planning Problems: Serving the Christmas Shopper

For all department stores and for many other lines of retailing the Christmas shopping season is the most important sales event of the year. It offers management the opportunity for substantial profits if handled rightly, and the risk of large waste and lost motion if planned poorly.

This planning is more difficult than appears at first glance. Comparison of results from year to year involves not only an effort to take into account the differences in business conditions and weather, but also the length of the shopping season between Thanksgiving Day and Christmas Eve, and the number of

days in the final shopping week before Christmas.

Retailers have found that the heaviest shopping occurs in the week before Christmas when the holiday falls on Monday, Tuesday or Wednesday, but that the peak of business will likely come in the same week as Christmas when it falls on Thursday, Friday or Saturday. The degree of this shift, however, is hard to measure or anticipate because of the many variables in the equation.

For example, in 1954 many department stores found they had employed much of their temporary help too soon, paid out large amounts in wages for wasted time during the week of December 13 through 17, but did not dare to drop the extra help and were hard put to serve the customers from December 20 to 24.

One large department store chain organization studied the problem with great care and pointed out that if the annual average sales volume per clerk hour is considered as "par" and rated at 100, these variations will occur: minimum productivity normally comes about three or four weeks before Christmas when the newly-hired help is not fully trained and the index figure would be 50, or half the normal rate. At the other extreme, the peak of sales per clerk hour would occur a few days before Christmas with an index figure of about 130.

Since labor is the largest single operating expense in retailing, the temporary payroll in the Christmas season is a substantial item. A stabilized calendar, permitting a better analysis of this cycle, would gradually yield more efficient planning. The saving would inevitably show up in ways such as improved profits and the competitive pricing of merchandise.

Management Confusion When a Holiday Falls on Saturday

The National Office Management Association reports that wandering holidays consume much unnecessary executive time and effort. For example, a considerable number of special surveys were made during the fall of 1954 by NOMA Chapters and by various chambers of commerce and other organizations in various cities regarding the handling of the Christmas holiday. The question was, essentially: should Friday or Monday or no extra holiday be given when Christmas falls on Saturday?

The amount of executive time devoted to volunteer committee work on these surveys, and the direct cost of mailing and tabulation of results, are perhaps a small part of the total cost to a single business, but these costs are the surface evidence of executive debate going on in many business organizations—a debate that is an unnecessary waste of time. Even less measurable, but certainly costly, is the amount of time spent by employees around the water cooler or talking from desk to desk asking, "Is the company going to give us Friday or Monday?" or grousing about the decision management has made.

NOMA finds that the average chapter of their organization makes at least one such survey every year because these holiday problems change continually. In addition, there are countless private surveys made each year on an informal basis by companies trying to establish a policy that will be compatible with the area and thus satisfy the employees. Lumped together, these private investigations take a vast amount of time.

Effects on Planning and Scheduling

Large organizations have to schedule complex and continuing tasks in detail for several months or a year ahead. Since no given day of the month always falls on the same day of the week, these schedules must be made up in detail every year. With a stabilized calendar, they would need only to be reviewed each year in order to incorporate changes caused by differences in policy, equipment, territory, etc. It is almost an axiom that the fewer the complications involved in any planning operation the less the chance of error and the better the result.

For example, the schedule on the following page is typical of that which must be made up to govern the work of each meter reader in each territory of Niagara Mohawk Power Corporation selling 16 billion kilowatt hours of power per year. Efficient meter reading and prompt invoicing to its hundreds of thousands of customers can make a substantial dollar difference to the company and in due course effect savings to the consumer.

In addition to the clerical cost of making up the schedules, several hundred dollars worth of supervisory time is involved. Most of this could be eliminated under a stabilized calendar. Even more significant would be the savings that could be expected to evolve gradually from closer supervision and scheduling where the same operation always falls on the same day of the week, permitting more accurate comparisons between men, territories, months of the year, and other operating units.

Allis-Chalmers Manufacturing Company of Milwaukee states that, "Minor cost advantages might be gained if overtime or additional personnel is eliminated

or reduced because of the opportunity to schedule all work more accurately."

Lincoln Electric Company of Cleveland, Ohio, reports that production scheduling is done in detail at least 90 days ahead with six persons involved on a full time basis. It is estimated that the work would be at least 2 or 3 per cent less expensive under a stabilized calendar.

Hotel sales managers point out that it would be easier to plan and sell convention business under a stabilized calendar. Where, for example, a particular organization now meets the fourth Tuesday in the month, and another wants the same facilities for the last Tuesday in the month, the schedule will work satisfactorily in some years, but will conflict when the last Tuesday is also the fourth Tuesday. The convention planning problems of all trade associations, professional groups, labor unions, and social organizations, as well as of hotel sales managers, would be simplified under a calendar which allowed no confusion, because conflicts in dates, once eliminated, would stay so. Also attendance at such events would probably improve.

Of interest also to hotels is the point made by a personnel manager that vacations could be spread over a longer period under a calendar that started the vacation cycle on May 27 (for example) and finished with Labor Day always on September 4. A longer vacation cycle is less difficult to schedule and less costly to the employer in terms of substitute help or lost efficiency. On the other side of the coin, summer hotel and resort facilities find that their profits are related to the length of the season and their ability to spread the load. Thus they would benefit also.

NIAGARA MOHAWK POWER CORPORATION

METER READING SCHEDULE - 1955

Accounting Dept. 38-Y
Syracuse, N. Y.
July 26, 1954
M. & S. D.

Batch	1955 Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1956 Jan.
1	12/28	1/26	2/25	3/28	4/27	5/26	6/27	7/27	8/25	9/26	10/25	11/25	12/27
2	29	27	28	29	28	27	28	28	26	27	26	28	28
3	30	28	3/1	30	29	31	29	29	29	28	27	29	29
4	31	31	2	31	5/2	6/1	30	8/1	30	29	28	30	30
5	1/3	2/1	3	4/1	3	2	7/1	2	31	30	31	12/1	1/3
6	4	2	4	4	4	3	5	3	9/1	10/3	11/1	2	4
7	5	3	7	5	5	6	6	4	2	4	2	5	5
8	6	4	8	6	6	7	7	5	6	5	3	6	6
9	7	7	9	7	9	8	8	8	7	6	4	7	9
10	10	8	10	11	10	9	11	9	8	7	7	8	10
11	11	9	11	12	11	10	12	10	9	10	8	9	11
12	12	10	14	13	12	13	13	11	12	11	9	12	12
13	13	11	15	14	13	14	14	12	13	12	10	13	13
14	14	14	16	15	16	15	15	15	14	13	14	14	16
15	17	15	17	18	17	16	18	16	15	14	15	15	17
16	18	16	18	19	18	17	19	17	16	17	16	16	18
17	19	17	21	20	19	20	20	18	19	18	17	19	19
18	20	18	22	21	20	21	21	19	20	19	18	20	20
19	21	21	23	22	23	22	22	22	21	20	21	21	23
20	24	23	24	25	24	23	25	23	22	21	22	22	24
21	25	24	25	26	25	24	26	24	23	24	23	23	25

AVERAGE REVENUE DAYS

Year													Total
1955	30.9	29.5	30.7	30.3	29.9	30.6	30.7	29.7	30.2	30.0	30.0	31.6	364.1
1954	32.1	29.7	30.6	30.0	30.2	30.6	30.7	29.7	30.2	30.0	30.0	31.5	365.3
Holidays	-	2/22		4/8		5/30	7/4		9/5		11/11	11/24	12/26/54 1/2/55
" (Sat.)	12/25/54 1/1/55	2/12											
Open Date	12/27												

Productivity Losses: The Cost of Mid-Week Shutdowns

When a holiday falls on a Friday, Sunday, or Monday, practically everyone is satisfied. It means a three-day weekend for the great majority of employees and a saving to most employers. But the saving to employers is less visible. It has

been said that "two hangovers in one week is bad for any business," but that is not quite the whole story.

A metal working or machinery plant, for example, rarely gets as good production on Monday morning as on other mornings of the week, nor on Friday afternoon as on other afternoons. On

Monday mornings, heat-treating furnaces must be heated up and many types of machines and equipment—especially on continuous three-shift operation—must be “warmed up” or adjusted before they operate properly. On Friday afternoon in many industries various machines must be cleaned, so that paint, ink, adhesives or chemicals will not harden or deteriorate in the equipment during the week-end. When a holiday falls in the middle of the week, these losses—wastes that help nobody—may occur twice in the one week.

International Harvester Company, Chicago, reports:

It is generally conceded that there is a decrease in productivity of employees on the afternoon of the workday immediately preceding a mid-week holiday. The effort seems to vary according to the nature of the holiday, for example, Christmas versus July 4. Anticipation of the specific holiday is the apparent principal reason.

The attitude of Associated Industries of Massachusetts is typical of manufacturers who have examined the problem. They declare themselves in favor of The World Calendar, and holidays stabilized on week-ends, because of their belief that it would result in substantially improved production. Like most business organizations, however, they have no data to prove this belief.

The American Meat Institute, trade association of the meat packing industry, points out that several meat packers struck a bargain last year with their respective unions to close the first Monday in the hunting season, in lieu of such secondary holidays as October 12 and November 11. They declare that mid-week shutdowns add unnecessary costs.

A manufacturer of machinery reports:

Our productivity over all last year was

off 2.5 per cent on every start-up day (24 hours) and 2.2 per cent on every shutdown day (24 hours). Every start-up and shutdown shift then averaged 7 per cent off the average for all other shifts. . . . Other start-up costs not included amount to 4.5 per cent of direct labor for each start-up shift and 3.6 per cent of direct labor for each shutdown shift.

Let us assume that such a loss could be eliminated with respect to four holidays per year under a stabilized calendar placing holidays at the week-end. Improved productivity would come to about six-tenths of 1 per cent for the year, according to the computations of Professor John Firestone of City College of New York. If this difference is applied only to the value added by manufacture, as recorded back in the census of 1947 (the most recent available), the gain in productivity at that time would have amounted to about \$400,000,000 per year. If, to be conservative, the projection is limited to primary metals, machinery, transportation equipment, and related manufacture, it would still have amounted to \$68,000,000. Volume of production and prices have both increased since then.

Continuous Process Industries

Naturally, this problem is of less importance in certain continuous process industries, such as oil refining or glass manufacture where the operation goes on around the clock seven days a week.

In the steel industry, an observation from a large producer brings up an unexpected point. Whereas broken weeks are no particular problem in the blast furnace and coking operations, they do have an effect upon rolling mill operations. The industry has discovered how to slow down coke ovens and blast furnaces satisfactorily and does so every

week-end under normal conditions, hence pursues the same methods on holidays. However, a rolling mill shut down for a holiday in the middle of the week may suffer warping or deterioration of the rolls and result in an estimated lower value of output by about 15 cents per ton for the remainder of the week. Normally, new rolls are installed with the start of each week's operation and the mid-week holiday may impose the choice between overtime cost for continuous operation, or the scheduling for that week of products requiring less accuracy or quality.

Detroit's Industrial Power Consumption

The most impressive large scale demonstration of the effect of a mid-week holiday on productivity is the combined result of research done by the big three automobile manufacturers and of figures furnished by Detroit Edison Company.

The automobile studies indicate that the power consumed in a plant is an almost perfect indication of the production achieved. When a worker is absent, or inefficient by reason of anticipating a holiday shutdown—or suffering from a hangover—his machine is idle or does less work. That shows on the "power curve." When a man does not use his machine fully, it seldom consumes as much power even though it may be idling.

Detroit Edison Company, in compiling the figures on industrial power consumption shown in Charts IV, V and VI points out that not only their customers would achieve greater efficiency if mid-week holidays are minimized, but that Detroit Edison would sell more power.

Note that a holiday on Monday or Friday merely removes that day from the week's production and that the *rate of productivity*, as measured by power consumption, remains almost normal by comparison with the weeks before and after the holiday. In contrast, when the holiday falls in the middle of the week, the lower productivity, normally characteristic of Monday, shows up the day after the holiday. The slowdown, normally expected on Friday or Saturday, in some cases occurs the day before the holiday. The term "productivity" rather than "production" has been used on the reasonable assumption that the paid wage hours on pre-holiday and post-holiday workdays are approximately normal.

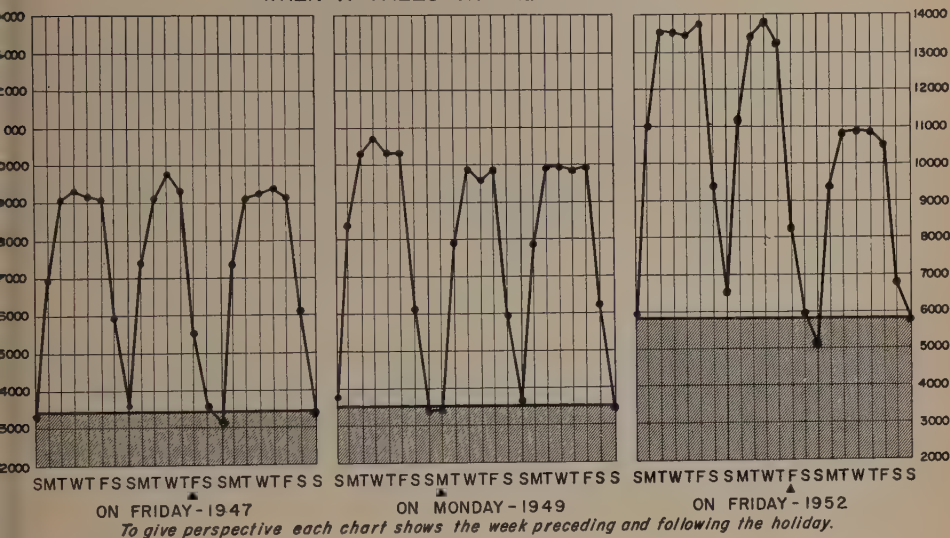
This is a particularly impressive history, for it interprets the composite experience of practically all of Detroit's large industrial operations. The story is consistent and unmistakable.

From bonus payment records of one employer producing machinery, a similar pattern of contrast develops between a normal week and a week broken in the middle by a holiday. The bars in Chart VII indicate the degree by which production per man hour can be expected to exceed the standards set by the company. Since these differences become the basis for bonus payments, the drop in production that shows before and after the holiday represents an almost inevitable situation rather than any lack of morale or incentive. It is not "intentional" on the part of employees.

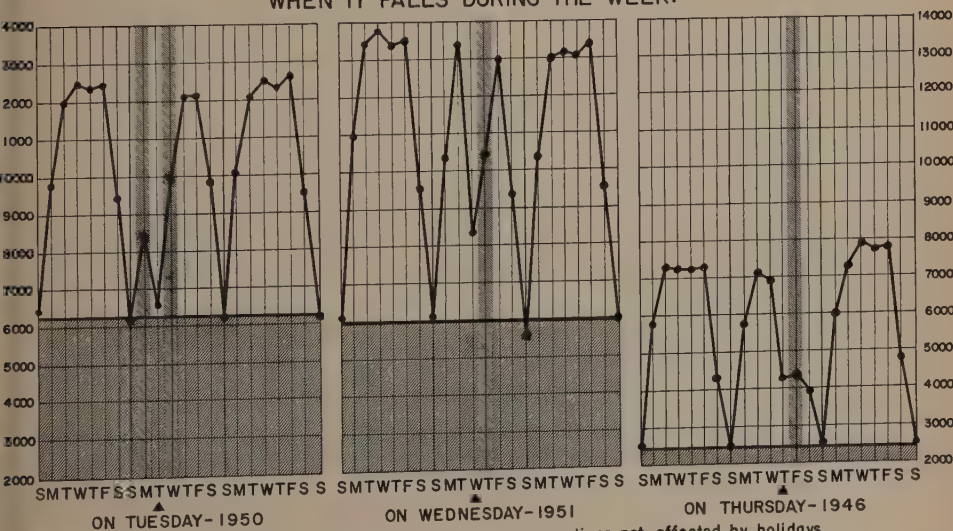
The question may arise as to whether this history from Detroit's highly mechanized and specialized factories is actually indicative of industrial experience elsewhere.

IV. EFFECT OF MEMORIAL DAY ON INDUSTRIAL PRODUCTION **AS SHOWN BY CURRENT CONSUMED BY LARGE INDUSTRIAL CUSTOMERS** **OF DETROIT EDISON CO. - (000 KWHR)**

WHEN IT FALLS ON THE WEEK END:



WHEN IT FALLS DURING THE WEEK:

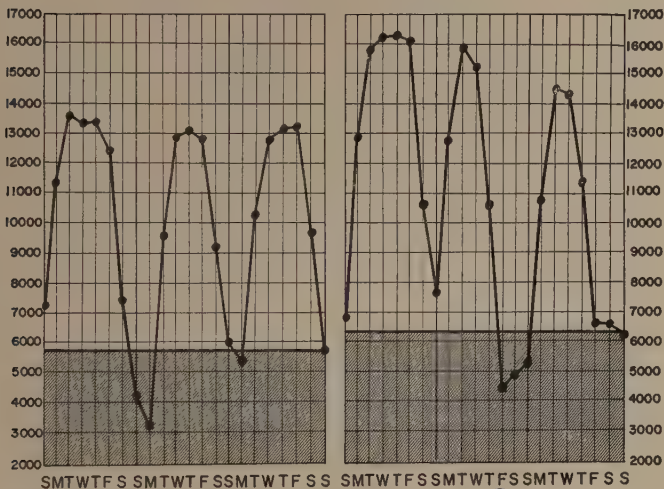


Standby Load - power consumed by continuous operations not affected by holidays, or for maintenance.

Days other than the holiday in which production is adversely affected by the holiday.

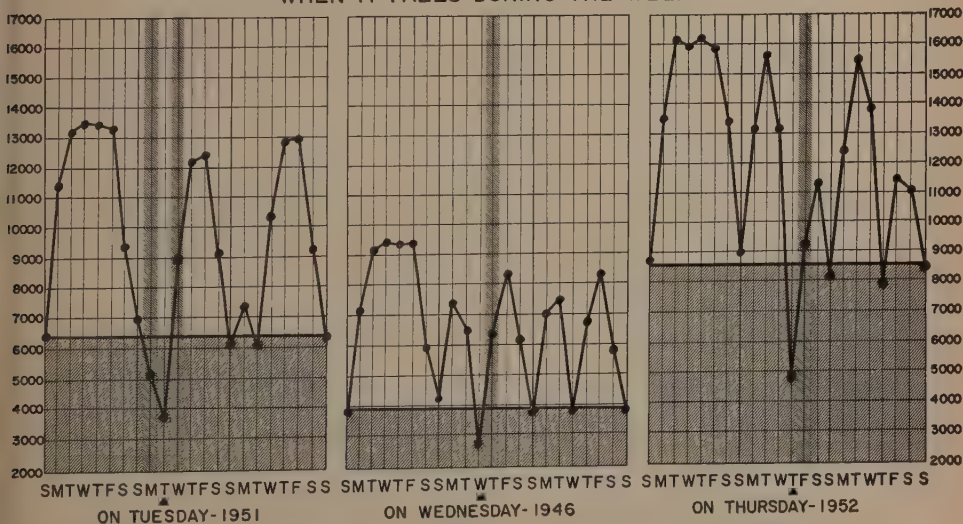
VI. EFFECT OF CHRISTMAS DAY ON INDUSTRIAL PRODUCTION **AS SHOWN BY CURRENT CONSUMED BY LARGE INDUSTRIAL CUSTOMERS** **OF DETROIT EDISON CO.-(000 KWHR)**

WHEN IT FALLS ON THE WEEK END:



To give perspective each chart shows the week preceding and following the holiday.

WHEN IT FALLS DURING THE WEEK:

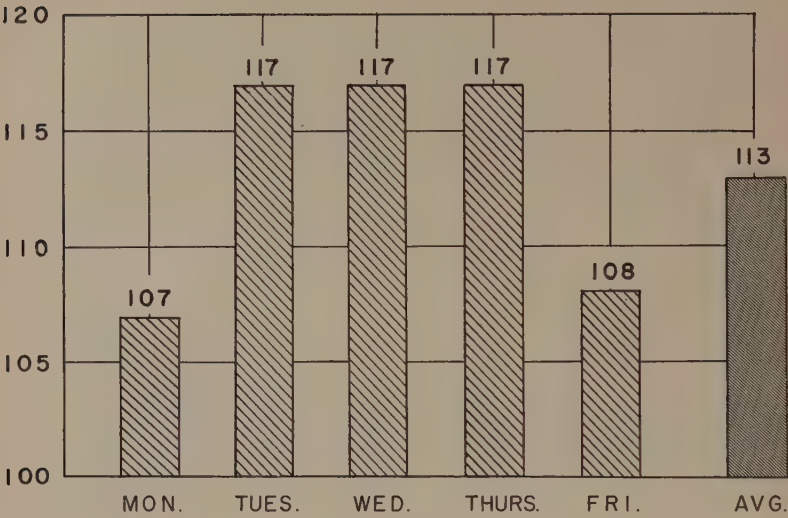


Standby Load - power consumed by continuous operations not affected by holidays, or for maintenance.

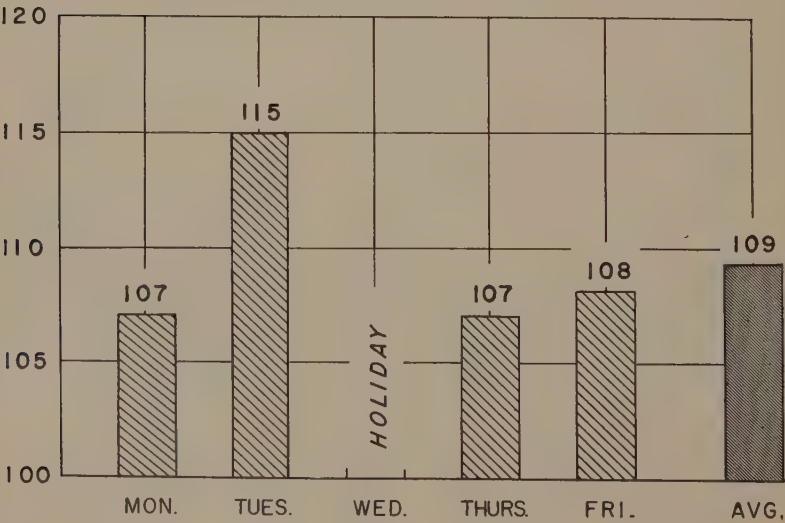
Days other than the holiday in which production is adversely affected by the holiday.

VII. MACHINERY MANUFACTURING

PRODUCTIVITY IN NORMAL 5-DAY WEEK



PRODUCTIVITY IN WEEK BROKEN BY HOLIDAY



Hermitage House . . .

*congratulates Elisabeth Achelis
on the fine reviews
of her new book*

OF TIME and the CALENDAR

"Brief, absorbing book, written by an intelligent and determined woman. . . . If the plan she advocates goes into effect, Elisabeth Achelis may rank with Julius Caesar, the Emperor Constantine and Pope Gregory XIII as one of those who changed man's reckoning of time." *Baltimore Sun*.

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and the CALENDAR

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OF TIME AND THE
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It would be a splendid thing if our 350,000,000 people could have a single national unified calendar. As most of the Indian calendars are arranged on a twelve-month basis, it would obviously be easier to meet on this common ground. I am in favor of such a calendar. I am in favor of a standardized calendar for the whole world. . . . I have been informed of, and I welcome, the international movement for calendar reform.—Mahatma Gandhi.

Different schemes of reform have been proposed. To my mind there is only one that is deserving of serious consideration, and that is the calendar advocated by The World Calendar Association.—Sir Harold Spencer Jones, Astronomer Royal.

Regarding the proposed World Calendar . . . I have previously been interested in this subject and have indicated my support for a World Calendar.—U. S. Senator James E. Murray.

The proposed World Calendar would be a unifying influence of the very first order. It would facilitate cooperation and understanding between the nations. . . . As a Christian minister I welcome the Plan and commend it from a conviction that its adoption would be a positive step forward, and a long one, in the direction of world harmony and peace.—Dr. Robert J. McCracken.

Order Form for *Journal of Calendar Reform* Readers

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Please send me copy(ies) *Of Time and the Calendar* by Elisabeth Achelis at \$2.75 a copy, postage to be paid by you.
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About the Author

(Excerpts from a Profile by Geoffrey T. Hellman in *The New Yorker*)

"Miss Achelis has, since 1930, spent practically all her time trying to secure the universal adoption of a permanent, unchanging calendar. Her vehicle is The World Calendar Association, of which she is founder and president, and whose membership includes H. G. Wells, August Hecksher, Bishop Manning, William Green, Professor John Dewey . . . Miss Achelis's interest in the calendar came practically overnight, and has never flagged. . . .

"In the summer of 1929, when she was staying at the Lake Placid Club, feeling more or less at loose ends, she heard the club's proprietor, the late Dr. Melvil Dewey, give a talk on how to simplify life. [This started her on her work of simplifying the calendar.]

"Miss Achelis is a handsome blue-eyed woman who dresses fashionably and has a rather shy air. She speaks forcefully in well-modulated tones. She habitually wears earrings, a custom which originated as a measure of identification. She and her twin sister used to look so much alike that when they entered women's doubles tennis tournaments, their opponents were never quite sure which one was serving. To clear up the confusion, their brother gave Elisabeth a pair of earrings to be worn as a distinguishing mark."

"The author writes with persuasive conviction," says *The Booklist*, American Library Association bulletin in recommending *OF TIME AND THE CALENDAR*.

"Many cogent arguments for the world-wide adoption of The World Calendar by 1961. . . . Readable useful book for any library." *Library Journal*.

"Miss Achelis' analysis of the calendar reform is clearly and interestingly presented and her arguments in favor of the new system are . . . highly convincing." *Morning News* (Savannah, Georgia).

"Elisabeth Achelis describes the evolution of the calendar and the development of The World Calendar in an engrossing volume." *Herald-Express* (Los Angeles).

Charts VIII, IX and X give a similar story from New Bedford, a town of diversified light industry, where the skilled old-time craftsman is still an important factor in the operation of many plants. These data, furnished by New England Gas and Electric System, represent total power sales. Household and other non-industrial users take more than half the output, so the holiday effect on industrial usage is "muffled" somewhat by this stabilizing factor. The company also points out that probably three-fourths of local industry closes "for vacations and plant maintenance during a two-week period including the 4th of July"—which accounts for the story shown in Chart IX.

A top executive of the Leslie Company, regulator manufacturers, summarizes this story in these words:

Take just one small unit of calendar expense under our present system, namely, the effect of midweek holidays on business and industry. From my own practical experience in the operation of controlled production . . . I estimate that as much as 1.5 per cent loss may result in a period of one year, due to starts and stops in the even flow of production and distribution. Most of this loss would be saved under a stable and consistent calendar. If a 1.5 per cent loss is charged against the national product of 300 to 350 billion dollars, you will get from this item alone a saving almost equal to the present interest on the national debt.

Cost of Absent Workers

Lockheed Aircraft Company, Burbank, California, reports that when a holiday falls on Tuesday, absentees on the previous day are so numerous that it proves impractical to operate continuous production lines. Lower productivity and potential spoilage of work make it a lesser evil to operate on Saturday, ten days before the holiday, if the production sched-

ule for the month must be maintained. At the peak of wartime operation the overtime costs for this solution of the problem mounted as high as \$80,000 for one holiday. Under current conditions, with employees somewhat more anxious to hold their jobs, the absentee rate is lower as well as the volume of scheduled production, and the cost of such a holiday may not exceed \$20,000.

The Quaker Oats Company reports that the absentee rate among production employees is always higher before and after a holiday. Since their mills and other production facilities represent about \$25,000 of investment per production worker, this means a substantial unnecessary waste in terms of idle equipment.

Schlage Lock Company of San Francisco, originators of drilled-in door hardware, estimates that natural slowdown, and the absentee problem before and after mid-week holidays, results in \$25,000 to \$30,000 a year in lost production, in terms of lower productivity per man hour and investment charges on idle equipment.

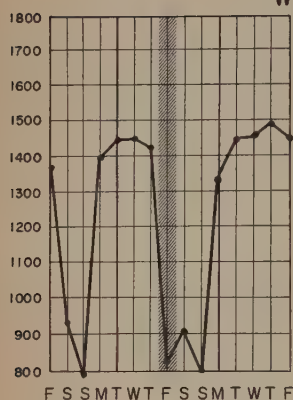
Kaiser Aluminum & Chemical Corporation of Oakland, California, with 10,000 union employees, finds that the absentee rate is 10 to 30 per cent on a Monday preceding a Tuesday holiday as compared with a normal absentee rate of about 5 per cent. Assuming the minimum dislocation caused by such a holiday—namely, a 5 per cent rather than a 25 per cent additional absentee rate—this means a \$12,500,000 worth of plant and facilities standing idle unnecessarily that day. The company's records show about \$25,000 worth of plant investment per employee.

In those industries with a similarly high investment per employee this could

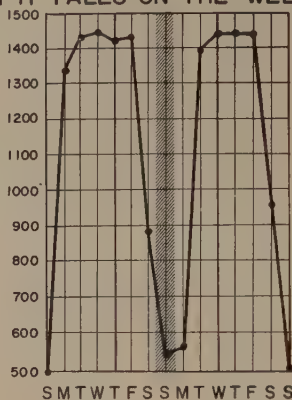
VIII. EFFECT OF MEMORIAL DAY ON INDUSTRIAL PRODUCTION

AS SHOWN BY CURRENT CONSUMED BY
CUSTOMERS OF NEW BEDFORD GAS AND EDISON LIGHT CO. -
(000 KWHR)

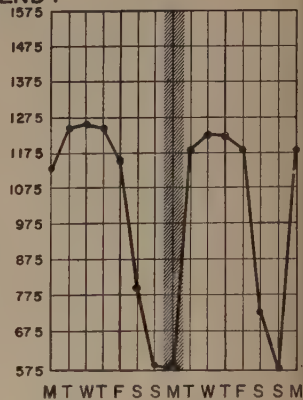
WHEN IT FALLS ON THE WEEK END:



MAY 30 : JUNE
ON FRIDAY - 1952



MAY 30 : JUNE
ON SUNDAY - 1948

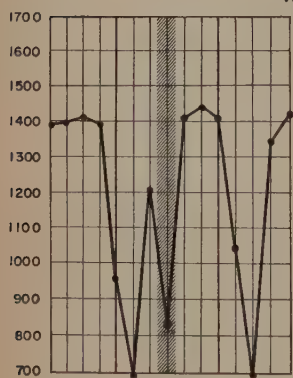


MAY 30 : JUNE
ON MONDAY - 1949

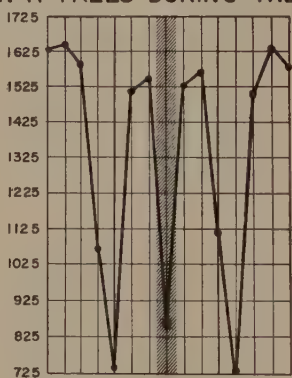
Location of May 30 - Memorial Day.

Each day shows the power consumption
per full work day excluding the "Standby Load."

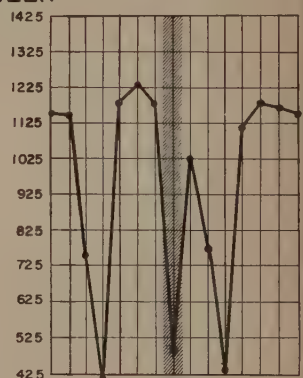
WHEN IT FALLS DURING THE WEEK:



MAY 30 : JUNE
ON TUESDAY - 1950



MAY 30 : JUNE
ON WEDNESDAY - 1951



MAY 30 : JUNE
ON THURSDAY - 1946

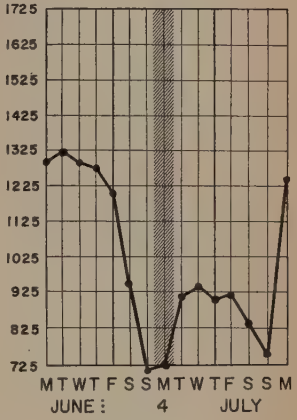
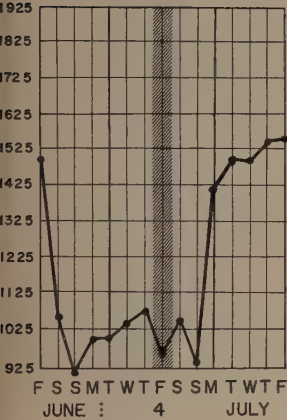
To give perspective each chart shows portions of presumably normal weeks preceding and following the holiday week. The holiday in each case is shown as the central day of a seven day cycle.

The bottom line of each chart represents the "Standby Load"

IX.EFFECT OF JULY 4TH ON INDUSTRIAL PRODUCTION

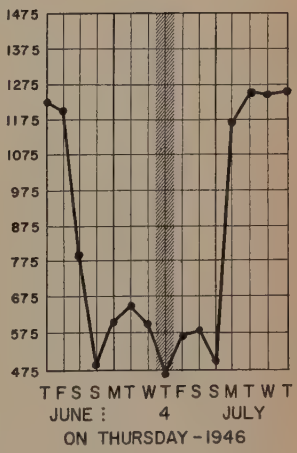
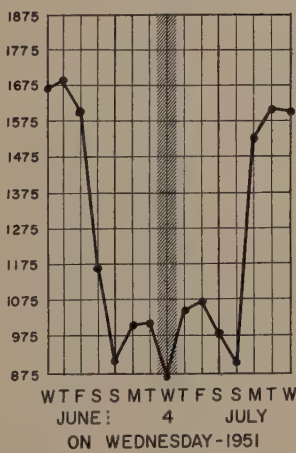
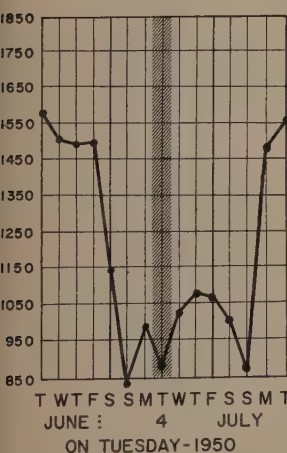
AS SHOWN BY CURRENT CONSUMED BY
CUSTOMERS OF NEW BEDFORD GAS AND EDISON LIGHT CO.-
(000 KWHR)

WHEN IT FALLS ON THE WEEK END:



ON FRIDAY-1952 ON SUNDAY-1948 ON MONDAY-1949
Location of July 4th - Independence Day. Each day shows the power consumption
Actual holiday week was also a vacation week. per full work day excluding the "Standby Load"

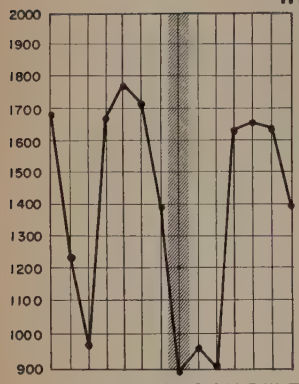
WHEN IT FALLS DURING THE WEEK:



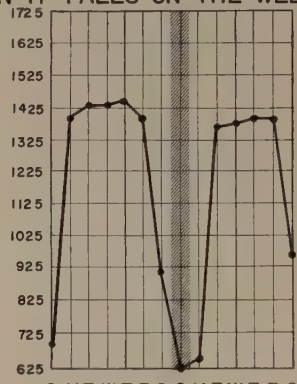
To give perspective each chart shows portions of presumably normal weeks preceding and following the holiday week. The holiday in each case is shown as the central day of a seven day cycle.
The bottom line of each chart represents the "Standby Load"

X. EFFECT OF CHRISTMAS DAY ON INDUSTRIAL PRODUCTION
AS SHOWN BY CURRENT CONSUMED BY
CUSTOMERS OF NEW BEDFORD GAS AND EDISON LIGHT CO.-
(000 KWHR)

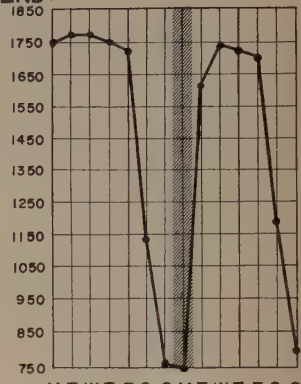
WHEN IT FALLS ON THE WEEK END:



ON FRIDAY- 1953



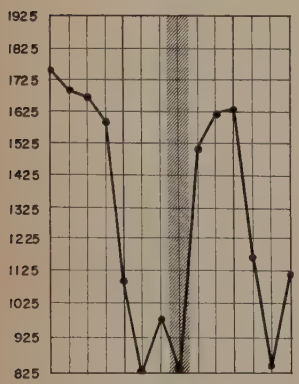
ON SUNDAY-1949



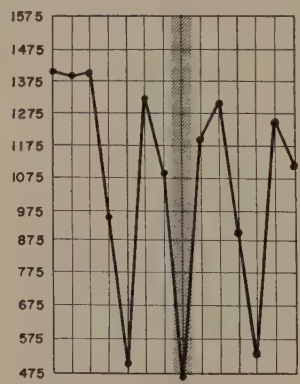
ON MONDAY-1950

Each day shows the power consumption per full work day excluding the "Standby Load"

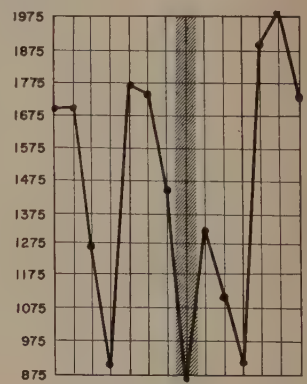
WHEN IT FALLS DURING THE WEEK:



ON TUESDAY- 1951



ON WEDNESDAY-1946



ON THURSDAY-1952

To give perspective each chart shows portions of presumably normal weeks preceding and following the holiday week. The holiday in each case is shown as the central day of a seven day cycle.

The bottom line of each chart represents the "Standby Load"

mean something approaching \$2,000,000,-000 worth of equipment unnecessarily idle in American business on every day isolated from the remainder of the week by a Tuesday or Thursday holiday. To keep our perspective, it should be repeated that this is small relative to the total number of working days in a year and relative to the total of equipment investment. But it is certainly an unnecessary waste.

Cost of Stopping and Starting

Collins & Aikman of New York, large and long-established makers of fabrics for automotive and upholstery uses, makes the following comment:

Our Engineering Department estimates that at each plant the cost to shut down and start up our boilers in the middle of a week approximates \$200. However, this is the smallest part of our cost.

Our Resident Manager estimates that in the dyehouse and this, of course, affects the finishing department as well (where continued cycles are in effect) the efficiency on the starting day of the week and also the ending day of the week is only 75 per cent of normal. This means, therefore, that a holiday falling in the middle of the week

would occasion a shutting down process and also a starting up so that in a five-day week we would have only one normal day.

If the holiday happens to fall on a Tuesday or Thursday, we usually shut down both days as we feel it is not practical to start up for a single day. This factor must be present in every industry which works a cycle around the clock and has the problem of starting up gradually and then easing off to a shutdown.

International Harvester Company observes that a cost penalty is "caused by a mid-week holiday because certain facilities must be maintained or only slightly reduced for a one-day holiday, whereas for a week-end, Saturday through Sunday, the same facilities may be cut to a minimum and for a longer period of time."

United Aircraft Company in Hartford finds that heat-treating furnaces present a problem in connection with mid-week holidays. Such a furnace must either be kept at working heat and idle during the holiday, or it must be shut down and the cost of bringing it back up to the required heat is equal to a substantial part of a day's operating cost.

SECTION C—SALES MANAGEMENT AND PROMOTION PROBLEMS

The vagaries of the calendar have a less widespread effect upon sales management and promotion than upon production problems in business. But even here the present calendar is a significant cause of waste; and a stabilized calendar offers the promise of improved service to the public as well as profits to those who render the service.

A calendar stabilizing holidays on

week-ends would have a marked effect upon the operations of hotels and transportation companies. However, the data furnished by these organizations are so significant in terms of human values—of increased rest and recreation for millions of citizens—they have been discussed separately in Section D of this report. Some other calendar problems in the sales and promotion area are, how-

ever, strictly of interest to management, and are summarized below.

Salesman's Broken Week

Perhaps the most obvious problem is the effect of a mid-week holiday on a salesman's productivity. Some organizations feel that there is no loss involved because plans are made in advance to hold sales meetings or to concentrate on paper work during the week broken by a holiday. Others find that salesmen resent being pulled into headquarters on such a week, because they lose a holiday with the family.

Many a salesman calls on customers near his headquarters during a week broken by a holiday. But if it falls on a Tuesday or a Thursday, the temptation is always present to take a long week-end with the family. By the very nature of selling, in many organizations with a scattered sales force, supervision over such detail is not practical.

The result is that Cutter Laboratories of Berkeley, California, makers of hospital supplies, believe salesmen average noticeably more calls per working day in a solid week than in a week broken by a holiday. Even though there are customers to be reached close to the branch office or the salesman's home town, he apparently makes less effective use of his time than he does on a well-established circuit.

Omar Incorporated, a large chain bakery headquartered in Omaha, Nebraska, reports:

We do find that there is a decrease in efficiency of employees during a holiday week.

Ninety-five per cent of our business is from the bakery directly to the home. That is, the salesman goes from door to door

with his merchandise. The goods that are baked today are delivered tomorrow. In the case of a holiday, therefore, our baking crews work on the holiday but are off the day before the holiday.

Type of Selling

A large manufacturer of industrial equipment and supplies, points out an interesting difference between equipment and supply sales. The equipment salesman may work a long time on a single prospect and it is therefore difficult to trace any difference in his production that might be caused by holidays or calendar irregularities. However, in the day-to-day sales of expendable supplies, productivity is closely related to the number of calls made. They estimate about 2 per cent less productivity per man day in a week broken by a holiday.

It would be a considerable job to estimate what proportion of the country's six hundred thousand traveling salesmen are affected by this problem, but it must be substantial. The staple consumption goods—foods, textiles, paper, soap, industrial supplies, etc., have always constituted the largest part of the dollar volume of our industrial production. These are the kinds of merchandise in which the number of calls made by the salesman is likely to measure his effectiveness.

Sales Volume of Hotels

Confirming these observations on the traveling salesmen's problem is the widespread comment by hotel managers, that commercial business is poor during a week broken by a holiday. An exception to this finding is noted by a group of hotels operating in the far Northwest. They believe that distances are so great in their region that a salesman does not at-

tempt to go home even when the holiday breaks into his week. Of course, when that is the case, and the salesman lays over in the hotel, his expense that day is non-productive and an unnecessary waste to his company.

Another aspect of the hotel problem is called to attention by The Balsams, a summer hotel in New Hampshire:

One of our industry's chief problems is that we have no background for comparison-estimate. For instance, business conditions, weather in the cities and weather at a resort may be about the same on, say, the Fourth of July this year as last year or the year before. But the Fourth of July does not fall on the *same day of the week* this year as it did last year and it deprives us of scientific evaluation of what to expect. There is no way we can sit down with business, political and weather charts and say, "This factor will probably affect us this way or the other because a parallel set of conditions brought this effect three years back." There is no way to prognosticate, except by guesswork, because, whatever the conditions, the holiday has probably

not been on the same day, or date, for six or seven years . . . and in cases, for 11 years back!

Accurate planning and food-buying can make a real difference in net profits for a hotel or restaurant.

Steamship Schedules and Promotion

The Luckenbach Steamship Company, Inc., operating primarily freight ships between the east and west coasts of the United States, must re-schedule its sailings every year in order to avoid arrivals and departures on Sundays and holidays insofar as possible. Whereas the calendar makes little difference in ship operation—you can't shut down a ship at sea, and swim home for the week-end—a stabilized calendar could make the scheduling and promotion of freight business easier. Under such a plan, with every quarter-year on an identical pattern, shippers could soon memorize a standard schedule of sailings.

SECTION D—HUMAN VALUES OF A STABILIZED CALENDAR

The facts and figures furnished by the managements of the many corporations contributing to this study appear to reinforce powerfully the opinions that have long been expressed by students of the calendar problem. There will be values for everyone from a stabilized calendar, not only for astronomers, engineers, statisticians, cost accountants; not only for management seeking added profits, but for the housewife and the wage earner as well.

The benefits to the average citizen will be of two major types: (a) deferred benefits in terms of lower prices or better quality of goods, to the extent that a

stabilized calendar eliminates some of the wastes in production and selling that have been shown by the figures in previous sections of this report; (b) immediate benefits in terms of more usable rest and recreation out of the same number of available holidays.

Repeatedly, in the course of discussions with management, some executive would point out that he felt the benefits to the company's employees were more important than the potential operating economies. In a number of cases he added the observation that everyone gains, because an employee, who has had real rest and recreation from his holi-

day, works better and thinks more clearly.

Not only will this be in actual realization but in the removal of uncertainty. Under present conditions the worker often has little or no advance notice of his employer's decision about the holiday which looms up as coming in a position, such as Saturday, requiring special treatment.

A stable calendar will also simplify the personal budgeting of several million people—including all employees of the Federal Government—who are paid 26 times per year. This means that two months in every year contain three payrolls. Where these "jackpot" months now differ from year to year, they would remain the same under a stable calendar, lending themselves well, for example, to semi-annual life insurance premium payments.

Values of Long Week-Ends

You probably look forward to the three-day week-end when Memorial Day or some other holiday falls on a Monday. It is almost as good when it falls on a Friday, at least for the many who are on a five-day week.

Experts tell us that two weeks' vacation is three times as effective as a one-week vacation, if you need to restore your energy and clear your mind. It seems likely that a three-day week-end is twice as valuable as a two-day stretch, in terms of relaxation. This is especially true for those who live in large cities and must use a half-day of travel at each end of the week-end to reach country or shore resorts.

Saturday Holiday Confusion

Many people experienced in 1954 the confusion that occurs when Christmas

falls on a Saturday. In a single family with three wage earners, working in different plants, this was the result: the father's employer gave Monday, December 27, as a holiday; the daughter's office closed on Friday the 24th; and the son's employer apparently figured that a Saturday Christmas was his good luck and gave no time off. The family's possibility of a three-day week-end trip together was effectively stymied.

Along with the occasional employee who loses his holiday because it falls on a Saturday, there are probably more cases of employers who have drifted into the habit of extra holidays because of calendar irregularities. This is considered by some executives as a type of concealed wage-boost from which the company is likely to get little credit or benefit. A number of companies observed that they now give a Monday before a Tuesday holiday or a Friday after a Thursday—oftentimes in place of some secondary holiday such as Columbus Day or November 11, which is not recognized as a legal holiday in all states.

Such a bonus holiday, however, is seldom announced very far in advance. Although it obviously pleases the employees, they often fail to get full value from it because it is announced only a few days ahead of the event, too late for planning visits to relatives or friends out of town.

Week-End Holidays without a Stabilized Calendar

Why does this process of stabilizing holidays on the week-end need to wait upon the shift to an orderly calendar? An effort to put holidays on Mondays has already yielded valuable results in isolated cases, but in the vast majority of

instances it has proved ineffective or impractical. There are several reasons for this: For example, one employer reports a specific deal with the unions in his plant to take the Friday after Thanksgiving in place of an earlier holiday in the Fall, when that holiday fell on a Wednesday. But the union was not ready to make a continuing bargain on that basis, preferring to have the holiday at its regular time when it fell on a Monday.

Another employer indicated that he would like to make some such arrangement, but feared to open the question with his union because it would run into difficulties of definition, might reopen other issues, and altogether the potential dangers out-balanced the potential benefits.

Another employer, whose plants are the principal source of payroll in the towns where they operate, made this observation:

We generally write a three-year contract with the Union. Under the present calendar all three years may bring a particular holiday on Saturday, Sunday or Monday, and the issue is not important because we are committed to a certain number of holidays per year. In another three years, if the calendar fell exactly in step with our needs, that holiday might fall successively on Tuesday, Wednesday or Thursday, and we'd have a basis for discussion with the Union about stabilizing it on a Monday. We have done a little of this, but under the proposed World Calendar it would become much easier. For example, I believe we would have immediate agreement with our Union to put Memorial Day on Monday, May 27.

The American Meat Institute in Chicago has studied the holiday problem, because a week broken by a holiday does represent added costs and hazards of spoilage in the meat packing industry.

Various processes represent a cycle of two or three days and a shutdown of any round-the-clock operation—the type of shutdown and start-up costs mentioned in the discussion of industrial problems.

The Meat Institute further points out that some members located in the South do not now observe May 30, since that is looked upon as a “Yankee holiday.” Consequently, it should be possible to get nation-wide agreement upon a single day devoted to the memory of departed heroes, friends and relatives—at an appropriate time of year for the planting of flowers in cemeteries. Would not May 27 do as well as any other day?

Effect of Holiday Week-Ends on Travel

The amount of recreation, family reunions, and other benefits enjoyed by people out of a long week-end are reflected by the records of the New Haven Railroad. From a record of non-commuter travel in and out of stations believed to be typical, it appears that a holiday in the middle of the week yields little or no increase in traffic over the normal volume to be expected. But if the same holiday falls on a week-end, traffic jumps 30 per cent or more.

Similarly, the Greyhound Bus Lines find from their records that Decoration or Independence Day on a week-end adds 30 or 45 per cent to their normal volume of travel.

The Sheraton Hotels Company of Boston, operating a chain of 30 hotels, noting that a holiday in the mid-week does decrease commercial volume, also finds that a holiday on the week-end results in an estimated 15 per cent of added volume for the hotels in popular tourist spots,

such as New York, Boston and Cincinnati.

The *American Magazine* made a special analysis of their National Travel Index data and have come up with similar findings:

Due to the fact that we assign all travel to the month in which the trip started, all travel over the Labor Day three-day holiday

it occurred on Sunday (celebrated on Monday) and resulted in a long week-end. In 1953 total travel days per 100 families was 6 per cent higher in May than it was in April whereas in 1954 the increase between April and May was 19 per cent, further substantiating indications of the analysis of the Labor Day week-end situation.

The third holiday about which we have data is the Independence Day situation which provided a three-day week-end in

MEMORIAL DAY RAILROAD PASSENGERS*

Selected Major Stations—New Haven Railroad

Holiday	Year	Travel Days Affected	Passengers (000)		% Difference
			Normal	Holiday	
On Week-ends:					
Monday.....	1949	Friday-Tuesday	156.3	202.0	30
Friday.....	1952	Thursday-Monday	193.5	249.4	29
In Mid-weeks:					
Tuesday.....	1950	Monday-Wednesday	96.4	102.2	7
Wednesday.....	1951	Tuesday-Thursday	97.4	92.4	-4

* Non-Commuters; same days in week previous to the holiday are assumed as normal

week-end in 1952 was assigned to the month of August, since Labor Day that year was on September first. In 1953 and 1954, however, all such holiday travel was classified during the month of September. In 1952 September travel showed a drop of 61 per cent as compared with August whereas in 1953 the drop was only 45 per cent and in 1954, 55 per cent. This would indicate higher than average travel during a month in which a three-day holiday week-end occurs.

There is also a similar but not parallel situation with respect to Memorial Day where our comparative data is available for only two years, 1953 and 1954. In 1953 Memorial Day fell on Saturday so that it was not a long week-end whereas in 1954

both 1952 and 1954 but only a normal two-day week-end in 1953 when July 4 fell on Saturday. In 1952 July travel was 69 per cent above June and in 1954 56 per cent above June whereas in 1953 the increase for July over June was only 49 per cent.

In view of these three holiday week-end situations (all of which are celebrated nationally) it would appear that a long week-end offers a definite stimulus to travel which would not otherwise take place. The extent of the increase does not seem to be surely calculable on the basis of our data now available, although it should be possible later on after we have accumulated a sufficiently long series to enable us to remove seasonal and long term trends.

SECTION E—THE TASK REMAINING AND THE BASIS OF PROGRESS

Coverage of Report

Within the limits of time and money available for this study, it has been possible only to scratch the surface. The experience of a relatively few industries has been explored. Much fruitful work remains to be done when we are ready to give serious consideration to a stabilized calendar. Its effect on all important industries would need to be explored.

The problems of transition to a new type of calendar would also need careful study so as to minimize the confusion, the litigation and other undesirable results that are always possible in the transition to any new way of doing an old job.

Students of business history will remember that government, organized labor and business management were able to unite with enthusiasm behind President Herbert Hoover's program to eliminate waste in distribution. Inaugurated during his term as Secretary of Commerce, this program has yielded continuing benefits to all of us ever since. We should also remember, however, that the channel of application led through manufacturers and wholesalers and permitted reasonable profit as an incentive to the effort.

In much the same way a stabilized cal-

endar can benefit all of us by eliminating waste and by providing incentive profit to the business enterprises which are a necessary channel of application.

Progress the Product of Leadership

Comment on the limited scope of this report must be balanced by another observation. Purposely, the findings have been based upon careful discussion with relatively few executives, rather than any effort to make a broad and balanced "public opinion poll" among business men. Practically all human progress has been the fruit of *insight and imagination exercised by a few*. Whereas the safeguarding of *human rights* is best achieved by the majority support of the many, *human progress* is most often achieved by reason of one of the human rights thus safeguarded: the freedom of a few individuals to imagine and to experiment.

Only a few people see the possibilities of any proposed new development—that is why some enterprises move ahead and some fail. That is why this discussion of the potential benefits to business from the proposed World Calendar is based upon the discernment of those businessmen who have studied the problem.

APPENDIX A

Negative Observations

For future reference by students of this problem, it may be well to report a few instances in which anticipated economies or advantages of a stabilized calendar

proved to be unimportant or non-existent.

Managers of apartment buildings and residential hotels indicate that there would be no particular difference in operations under the present calendar versus the

proposed. Since long-term tenants commonly sign annual leases, differences in the length of months have little significance. Short-term tenants are generally on a weekly basis. Unlike commercial hotels, these operators do not have to promote and schedule conventions nor try to guess the effect of holidays on food and room requirements. The location of holidays in the week makes no difference to these managements, since heat and other services must be furnished to tenants at all times.

Similarly, *operators of office buildings* indicate that it has been found almost as expensive to heat up a building on Monday after it is allowed to cool over the week-end, as it is to keep up a reasonable degree of heat during the week-end. In addition, the management risks complaints from tenants even when the thermometer reads at a satisfactory level. A building that has been cold for a long period does not become comfortable for several hours, until the heat soaks into walls and furniture. Office buildings, with respect to length of tenancy and comparisons with past performances, have the same characteristics as apartments. Management in these instances has a very

minor problem of advance scheduling of operations.

In contrast to observations of most *department stores*, the Emporium Capwell Company of San Francisco believes that a holiday in the middle of the week yields better sales volume for a department store than a holiday on a week-end, because school is out and mothers take the opportunity to bring children downtown shopping. (The opposite view is that a three-day week-end encourages travel to resorts and stimulates the sale of play clothes and sporting goods.)

In contrast to the striking figures presented by other *public utilities* regarding the effect of mid-week holidays on industrial production, the Seattle Gas Company believes that a changed calendar would make little difference in their operations. The load is primarily residential and cooking must go on every day. As to industrial load, either the amount of it is not sufficient to be noticeable in the Company's records, or users keep gas-fired industrial equipment on a "low-fire stand-by" basis during holidays. This plus the added gas consumption to bring such equipment up to operating heat seems to cause little change in the load.

APPENDIX B

Calendar Manufacturers

It is commonly said that calendar manufacturers would be the only ones to suffer from a stabilized calendar. Although it did not prove possible to interview a calendar manufacturer during this study, several points came up which would bear on their outlook:

1. A great many calendars are so con-

structed that one sheet is torn off each month and the calendar is, therefore, consumed during the year. From the advertiser's standpoint, this is desirable since he puts a new message in front of his customer's eye every month. Thus the only change for the calendar maker would be a reduced composition cost on the calendar grid itself. The annual issue of

advertising calendars would be as desirable as ever.

2. All sorts of desk calendars and diaries are likewise expendable by their nature, and the need for them would not change. The cost of production might be reduced by eliminating the need for new plates every year.

3. The tendency of the proposed cal-

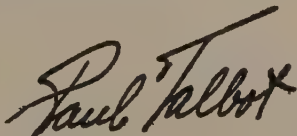
endar to stabilize the meeting dates of clubs, associations and the dates of conventions and other large scale meetings would open up a new need and opportunity for a type of calendar sponsored by trade associations or trade journals, showing graphically the dates of important events pertaining to a particular industry or profession.

THE BACK YARD

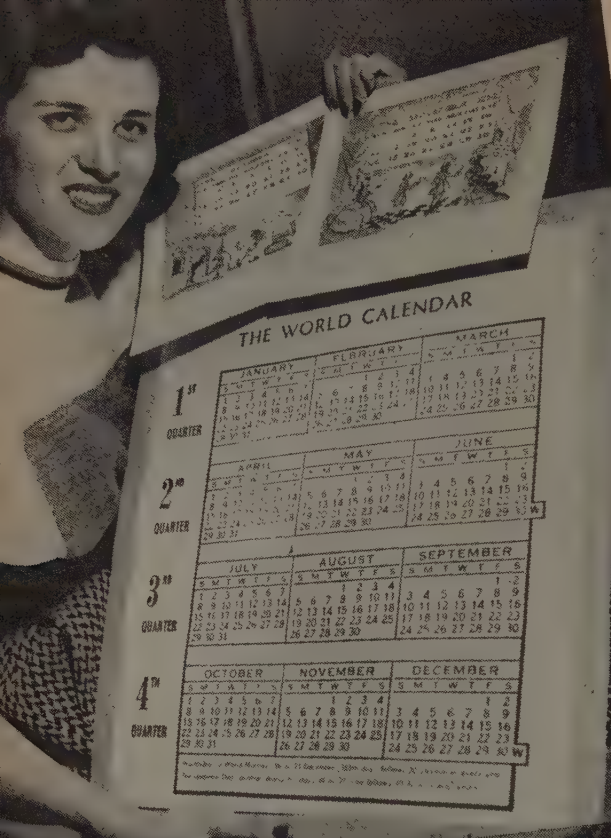
At long last the *United Nations* is taking some definite action concerning **calendar reform**. The 18 nations represented on the *Economic and Social Council* have unanimously requested all governments to study the subject and to report their views by May 1955.

No need to comment on the many faults in our present Gregorian calendar. They are all too obvious. The question is *how* and *when* to make a change. While there are still some differences on minor points, it is now pretty clear that, out of much study and discussion, the **World Calendar** has emerged as the almost unanimous choice of businessmen, religious leaders, scientists, statisticians, and the general public. We believe it should be adopted by international agreement as soon as possible.

The adoption of the **World Calendar** is not being held up by "objections", but rather by *human apathy* -- and a good deal of that *apathy* is right here in this country. Yet we, of all nations, would gain most by having a regularized perpetual calendar. How about letting your Congressmen know how you feel about *calendar reform*?



The above editorial is condensed from the 17 January United Business Service, Paul T. Babson, President, a publication consisting of "Concise Weekly Forecasts based on the United Opinion of Recognized Business, Financial and Economic Authorities."



The World Calendar Girls

Left: Sue Feit of Philadelphia shows the new World Calendar now under study by the United Nations. The NEA photograph appeared in over two hundred newspapers in January.

THE WORLD CALENDAR

1 st QUARTER	JANUARY	FEBRUARY	MARCH
	S M T W T F S	S M T W T F S	S M T W T F S
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
	29 30 31	29 30	31
2 nd QUARTER	APRIL	MAY	JUNE
	S M T W T F S	S M T W T F S	S M T W T F S
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
	29 30	31	30
3 rd QUARTER	JULY	AUGUST	SEPTEMBER
	S M T W T F S	S M T W T F S	S M T W T F S
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
	31	31	30
4 th QUARTER	OCTOBER	NOVEMBER	DECEMBER
	S M T W T F S	S M T W T F S	S M T W T F S
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
	31	30	31

Available for purchase from 10 a.m. to 11 a.m. 12 noon, 1 p.m., 2 p.m., 3 p.m., 4 p.m., 5 p.m., 6 p.m., 7 p.m., 8 p.m., 9 p.m., 10 p.m., 11 p.m., 12 midnight.

Below: Holland's Panorama magazine presents this attractive Dutch girl (identity undisclosed) to illustrate a long article on The World Calendar.

DE WERELD KALENDER

JANUARI	FEBRUARI	MAART
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
APRIL	MAY	JUNI
JULI	AUGUST	SEPTEMBER
OCTOBER	NOVEMBER	DECEMBER



REPORTS OF WORLD-WIDE PROGRESS

By Harriet A. Lillie

Secretary-Treasurer, The World Calendar Association, International

SIGNIFICANT progress toward international agreement on calendar reform was reported at the eighth annual meeting of The World Calendar Association, International, held at the International Building, New York City, on Friday, 14 January 1955.

Countries represented at the meeting were: Argentina, Australia, Belgium, Canada, China, Cuba, El Salvador, France, Greece, Japan, Mexico, New Zealand, Norway, Panama, Peru, Philippines, Switzerland, United Kingdom, United States and Uruguay. Direct and indirect reports were received from Germany, India, Ireland, Italy and other countries.

Officers of the international organization were elected as follows: President and Director General, Elisabeth Achelis; Assistant Director General, Arthur J. Hills (Canada); Vice-President, Charles S. McVeigh; Secretary-Treasurer, Harriet A. Lillie.

It was decided that representatives for specific missions or assignments would be appointed to perform liaison work when required.

The President reviewed the major achievements of the past year culminating in the Economic and Social Council of the United Nations' approving *unanimously* the Resolution introduced by India and seconded by Yugoslavia (see *Journal of Calendar Reform*, December, 1954, p. 168).

In view of this significant action, the immediate efforts of Affiliates and all other groups devoted to calendar reform should be concentrated on insuring that the respective governments reply affirmatively to the Secretary-General's request. It was suggested that this might be done as follows:

(1) presenting to heads of governments and chiefs of government departments submissions indicating the economic, social and other advantages of a balanced, regular, perpetual calendar, this to be followed by personal interviews;

(2) urging the press and other communication media to support the cause through newspaper and magazine articles and editorials, radio-TV programs, public lectures, etc.;

(3) demonstrating the advantages to employers and employees of the importance of calendar revision and securing the active support of international organizations such as the International Labour Organization, the International Organization for Standardization, the International Chamber of Commerce, etc.;

(4) informing the public generally of the advantages of calendar revision *and continuing to urge organizations and individuals in every country to request their respective governments to advance the adoption of The World Calendar.*

It was stressed that all endorsements or other favorable expressions should be for-

warded to the respective Ministers of Foreign Affairs in order that both the governments and the United Nations may be fully informed.

It was further stressed that the Ministers of Foreign Affairs should be reminded that the Secretary-General's request for their views does not imply that governments are asked *now* to make a final decision specifically on the plan proposed by the Indian Government; namely, that of The World Calendar. Apparently there has been some misunderstanding on this point. A number of Affiliates reported that their respective governments interpreted the Secretary-General's letter to mean that they must immediately approve or disapprove a specific proposal. It is the general interpretation, however, that by replying affirmatively governments will greatly encourage and strengthen the United Nations in undertaking the proposed general study of calendar reform leading to the adoption of the best calendar for the modern world. This point should be stressed by all Affiliates.

It was agreed that future activity must depend in large part upon the action to be taken by ECOSOC in May. The Association will communicate with the Affiliates concerning the program previous to and immediately after the ECOSOC meeting.

The reports and suggestions submitted by the affiliated organizations included the following highlights.

Australia. The Australian Affiliate is increasingly active with excellent results. The Astronomical Society of South Australia has joined with other important organizations in supporting The World Calendar. In May the *Journal of The Retail Traders Association of New South Wales* reported that its council "give full support to adoption of The World Calendar." The Pan Indian Ocean Science Association, at its international Congress held in Perth, Western Australia, recommended adoption of The World Calendar. Professor A. D. Ross, Chairman of the Affiliate, stated that while this cannot be taken as representing the views of the member countries of the Association, it does express the unanimous opinion of a large number of their leading scientists who attended the Congress. The following countries sent delegations: Australia, Burma, Ceylon, France, India, Madagascar, Malaya, the Netherlands, Pakistan and Portugal.

The Affiliate, through Mr. J. K. Lavett, Deputy Chairman, is maintaining close and harmonious contact with the Roman Catholic Church in Australia.

An excellent circular letter was drafted by the Victorian State Committee and forwarded, together with material on the revision, to all members of the Victoria Parliament.

The Australian Council of Retailers announced that the recent action of ECOSOC in adopting India's resolution was most heartening and their affiliated associations in other States have been notified of the news.

Further excellent publicity was obtained through Mr. Lavett's article in *Rydge's Business Journal* (Australia's leading business periodical) and by means of a display in the Museum of Applied Sciences, Melbourne.

Material on The World Calendar, together with an appropriate covering letter, was sent to about 130 trade unions in New South Wales, after consultation with Mr. Albert Thompson, one of Sydney's leading trade union leaders, who has signified his willingness to assist the movement in every way possible.

The Australian Affiliate plans to continue its approach to scientific, commercial, industrial and cultural organizations; to keep in touch with Parliamentarians; to extend the current press and radio campaign meetings and other gatherings; and to promote the cause on every possible occasion.

Belgium. On 14 May 1954, Professor F. Moreau, the new Chairman of the Belgian Affiliate, read before the National Committee on Astronomy, of which he is a member, a

statement regarding calendar reform. After an exchange of views, the Committee voiced a resolution inviting "the attention of the Government to the importance of having this question settled at the earliest possible moment."

The Chairman reported that he had arranged to send the article, "The World Calendar," by M. Tirouflet of the French Affiliate to members of the Belgian Government, to various Ministries and administrative agencies, and to financial, business and industrial concerns. He commended the article as constituting excellent publicity.

The Chamber of Commerce has been approached as well as the Belgian National Committee of the International Chamber of Commerce and its Secretary, Mr. Max Jottrand. It is felt that the forthcoming article on The World Calendar in the *Reader's Digest* (January) will produce a resounding effect in Belgium.

Canada. The year 1954 was one of special activity due to the action of India in October 1953 in putting The World Calendar plan before ECOSOC.

Throughout the year special efforts were made to get such Canadian Government support as was possible with Canada not at present on ECOSOC. A Memorandum, *Measurement of Time*, prepared for the Department of External Affairs, was sent to a number of other departments. This reviewed Canada's connection with Standard Time and Calendar Reform. The Department of External Affairs has been most cooperative.

The death of Mr. Harry S. Southam, Publisher of *The Ottawa Citizen*, on 26 March 1954, a member of the Canadian Affiliate, and for many years an ardent and valuable supporter of our cause, is recorded with great regret.

During July, the Chairman made a trip to Western Canada, achieving a considerable amount of publicity for The World Calendar and making valuable contacts.

The very welcome announcement of the Vatican's favorable attitude received much attention in the Canadian press, particularly in the Province of Quebec.

In New York in November, when the Honorary Secretary of the British Section and International Liaison Officer, Mr. James Avery Joyce, was present, many matters of importance were discussed with the President and Dr. Clarence R. Decker, consultant to the Association, and Mr. Walter Mitchell, Jr., presently engaged in special research concerned with financial savings to be obtained from adoption of The World Calendar.

The Chairman was granted use of a 15-minute period of the Department of Labour's broadcast *Canada at Work* to outline benefits to be obtained from The World Calendar. This was distributed to 57 stations from Newfoundland to British Columbia, 24-30 October. Other broadcasts made available were CPRA's *Weekly World Report* (31 October) and *Home Forum*, WRC, Washington, D. C. (5 November).

Contacts were maintained with important national organizations of employers and employees. The Canadian Chamber of Commerce, in a *Policy Declaration*, again requested government support at the United Nations for The World Calendar. A number of organizations cabled to ECOSOC during the Geneva meeting. The Canadian Council of the International Chamber of Commerce continues its support of The World Calendar.

The conflict caused by holidays such as Christmas and New Year's coming on Saturday, already a half or whole day off for many, was used to show how much better conditions would be with The World Calendar.

Throughout the year the press in Canada has devoted much space to the general subject of calendar reform and in support of The World Calendar in particular. Helpful publicity was obtained from interest attaching to the Indian proposal and subsequent events. The Chairman has made a point of answering as many letters as possible which gave any indication of opposition based on the fallacious claim of the unbroken continuity of the week.

China. In Formosa (Taiwan) the Chairman of the Chinese Calendar Reform Committee, Dr. Chu Chia-hua, reported that in 1954 the Committee had made numerous contacts with government organizations in urging support of The World Calendar.

El Salvador. During 1954 this Affiliate endeavored to disseminate the greatest possible quantity of information concerning the purpose of the Association. It has been able to

ascertain that there exists tacit acceptance of the project on the part of the intellectual elements, which promises well for the future, but sight must not be lost of the fact that in seeking to effect calendar reform, there will be certain determined opposition.

France. M. Jacques Tirouflet, new Chairman of the French Affiliate, rendered personal homage to his predecessor and friend, the late Paul-Louis Hervier, for 24 years a tireless advocate of the cause of reform.

The visit to Paris of Miss Achelis, President of the Association, gave perceptible impetus to the activities of those working on behalf of reform. Important conferences were held with M. Albert Caquot, Honorary President of AFNOR (Association Française de Normalisation), member of numerous international bodies and former President of ISO (International Organization for Standardization); M. Birlé, Director General of AFNOR; Dr. Henri Laugier, former Assistant Secretary-General of the United Nations; Professor Joseph Girard, formerly Professor of the Free School of Political Sciences; and M. Antierou, Director of Personnel in the State Secretariat for Technical Education. Progress was noted and agreement with the program drawn up was expressed.

A press conference was organized and attended by leading representatives of the major Paris newspapers, foreign newspapermen accredited to the French Government, representatives of leading European periodicals, etc.

Several impressive articles were published in major newspapers, especially in *France-Soir*, which numbers more than a million readers. Articles prepared by the Affiliate and texts transmitted by news agencies met with favorable reception from the French press as a whole. The Affiliate may claim that there is hardly a single Provincial paper which has not at some time reported on the reform as well as on the debates held in connection with the 18th session of ECOSOC. Material was also sent to influential personalities.

Brief articles have appeared in the French press reporting opposition by Rabbis: the Grand Rabbi of Paris has concerned himself with France's position with respect to calendar reform.

The immediate main problem is the position which France will take at the ECOSOC meeting in May. A calendar has been distributed to all members of the French Parliament, the Ministers, the Bishops and Archbishops, members of the leading associations—the chambers of commerce throughout the entire country—in a word, to all leading French personalities. Distribution of pertinent letters has also included countries speaking the French language; for instance, 300 letters to Canada, 200 letters to Belgium, and 75 letters to Switzerland.

The task of gaining support for the cause in the chambers of commerce throughout France is one to which the Affiliate will devote itself. The prospects are most promising.

Stimulated activities in France during the year 1955 are indicated in all spheres of action.

Germany. Active interest in calendar reform in Germany is once again apparent. Formation of the German committee, under way for some months, has now been completed. It will be known as "Arbeitskreis für Internationale Kalenderreform." Dr. Carl Boehm of Düsseldorf will serve as Chairman, and Dr. F. Haerecke of the German Committee of the International Chamber of Commerce, Cologne, as Vice Chairman. The committee, composed of some twenty members representing industry, wholesale trade, retailers, insurance, banking, transport and communications, chambers of commerce, etc., is in close contact with the competent departments of the Government and with the Central Statistical Office.

India. Under the chairmanship of Professor M. N. Saha, Calcutta, the work this past year in India has been exceedingly productive. The *Journal of Calendar Reform* has reported these activities in detail and they loomed large in the discussion at the annual meeting. All supporters of The World Calendar must share with this Association a deep sense of appreciation to India for contributing what well may be the most historic step forward in calendar reform in recent years.

Ireland. In New York, in November, Professor John O'Meara of University College, Dublin, who heads up a study group on calendar reform in Ireland, called at Association headquarters during his lecture tour of the United States and Canada. He reported sympathetic interest in Ireland in calendar reform and expressed the belief that his Government would reply favorably to the Secretary-General's request.

Japan. On 3 April the annual meeting was held at Osaka Municipal Planetarium. The committee organized a survey of public opinion in Japan on The World Calendar. A questionnaire was distributed among persons attending the conference of the Japanese Astronomical Society and the Japanese Meteorological Society. The results of the inquiry proved to be favorable to The World Calendar.

On 23 July the following cablegram was sent to the President of ECOSOC: "Endorsement World Calendar ardently requested. We support Indian proposal." On 28 July a cable was received with the information that ECOSOC had accepted the Indian resolution. Letters to the above effect were sent to leading persons in Japan, including Mr. Katsuo Okazaki, Minister of Foreign Affairs, and Mr. Shigeo Ohdate, Minister of Education, together with a pamphlet concerning The World Calendar.

On 15 November consideration was given to the writing and publishing of a book on The World Calendar for the Japanese public in order to familiarize them with the new calendar and at the same time to inform them in regard to the present situation.

Every endeavor will be made in 1955 to have The World Calendar approved by Japan so as to advance its world adoption Sunday, 1 January 1961. This Affiliate is in close touch with the Japanese Government and other organizations.

Mexico. Conferences on the advantages of The World Calendar were held at the offices of the Mexican Society of Geography and Statistics.

A report was recently made to the National Astronomical Observatory so that a reply to the United Nations could be made, particularly in reference to the position of the Mexican Government, when it supported the proposal to substitute The World Calendar for the Gregorian calendar. [In 1937 the President gave instructions to the Ministry of Foreign Affairs that Mexico "should support the draft reform"—The World Calendar plan.]

New Zealand. Interest among a considerable part of the community was reported to be apparent, but no feeling of urgency. The general reaction seems to be that the proposed calendar reform is logical and interesting, but there the matter usually rests. Likewise it is difficult to discover any violent opposition. This state of affairs is obviously due to the fact that the proposals have not been placed sufficiently before the general public.

Further action here must be taken along the lines of interesting business sections and discovering the reactions of religious groups. Scientific people and organizations invariably see the logic of the scheme and agree with it, but to the populace as a living organic entity, to whom the present calendar is part of their lives, revision is a much different problem.

The Government is by no means unsympathetic to the proposed World Calendar and is watching the matter with considerable interest. However, in the absence of any strong public demand at the moment, it will not feel disposed to take any leading part in bringing the matter forward. There exists a cordial exchange of information between the Chairman and the Government on the subject. Conditions indicate that more public interest will be aroused within the next few months.

Norway. Two metropolitan newspapers have carried articles on The World Calendar. A survey along the lines of a Gallup poll did not prove too encouraging. Having regard to Norway's long-time support of calendar reform, it was felt that the result of the poll should be regarded as an indication of the need for distribution of more educational matter to bring the general public to the same point of view expressed by Norwegian delegations in 1937 and 1947.

Peru. The Peruvian Affiliate informed The World Calendar Association, International, that Peru is entirely in favor of the calendar reform.

Philippines. Calendar reform is well known in the Philippines. Mr. Ramon Caro, Chairman, has continually sent literature to Congressmen individually as well as to the principal people of the different cities and provinces. Articles about the reform have appeared in newspapers. The Chairman reports: "We shall keep on doing our work until the Calendar Reform is finally approved by the United Nations."

United Kingdom. The year has been one of considerable activity. It was obvious that this would be so after the October, 1953, announcement of the action of the Government of India.

An important meeting of the Committee of the British Section was held at the House of Lords on 1 December 1953 (this, as usual, by courtesy of the Chairman, Lord Merthyr, in having arranged for the use of a committee room).

At this meeting, Mr. James Avery Joyce, the Honorary Secretary, having then just returned from New York, was able to report on the proceedings in regard to the Indian proposal, and to urge that every effort should be made by the British Committee to support this promising development. Mr. Peter Freeman, M.P., always an extremely active member of the Committee, discussed his own contacts with India on the subject, and expressed, on behalf of the Committee, the sense of the importance of the Indian action.

Early in the year there was published by Neville Spearman, Ltd., in London (and, by arrangement, in New York), a book written by the Honorary Press Officer, Harold Watkins, entitled *Time Counts*. This book, descriptive of calendar history with particular reference to the development of The World Calendar, was produced in attractive form at a popular price of 15s.

The first meeting in the New Year was held again at the House of Lords on 24 February, when the Honorary Secretary reported that he had recently made a visit to India, Egypt and Israel, in which countries he had been able to do valuable work, not only on behalf of the British Section, but of the movement in general.

At various meetings of the Committee the question was discussed as to the likely best approach to the British Government for presenting officially the case for The World Calendar, and particularly for expressing the hope of the Committee that when the question arose at Geneva the British Government would not raise any opposition to its further discussion on the basis, hitherto officially expressed by the Government, "that there was not sufficient demand in this country for Calendar Reform."

Following a request to the Foreign Office, a deputation waited on Mr. Dodds-Parker in May. The case for the withholding of any opposition on the Government's part was ably put forward by Lord Merthyr, and equally strongly supported by Mr. Isaac Pitman and the Honorary Secretary. Mr. Dodds-Parker listened most courteously to the deputation's statements and the feeling was that he was favorably inclined to the deputation's case. The result of this action on the Committee's part was, no doubt, reflected in the fact that at Geneva the opposition which, it has to be admitted, was rather feared, and which would undoubtedly have affected the outcome, did not materialize.

During the year there have been two notable broadcasts. The more important of these was an occasion when Sir Harold Spencer Jones, having returned from a visit to New York, appeared on the BBC Television in a discussion of The World Calendar. In March the Honorary Press Officer was invited to broadcast in the BBC Overseas program which goes out weekly under the general heading of "London Calling Asia." This broadcast was not only repeated later in another section of the BBC Service, but was summarized in the popular BBC Journal, *London Calling*, which is widely distributed overseas.

It has been a notable year from the press publicity point of view. In addition to a number of special articles in leading newspapers and trade journals and a large number of shorter reports and news paragraphs, a particularly significant event was the publication in *The Times* of a lead-article dealing with the principle of calendar reform and the advantages of The World Calendar. This led to a controversy in the correspondence columns of *The Times* which kept the subject before the readers of this distinguished newspaper for many days.

An important development during the year was the publication by the British Section

of a first number of "World Calendar News," a 4-page newspaper which it is intended to issue from time to time to report current World Calendar activities. Some 2,000 copies of this newspaper were circulated among members of Parliament and other influential persons. A second number is planned for the New Year.

A number of new pamphlets have been produced and widely distributed covering various angles of the impact of calendar reform on industrial, commercial, religious and social affairs. The demand for these pamphlets is steady, and they appear to be doing excellent work in spreading the calendar reform gospel.

During the proceedings at Geneva, the British Section had the privilege of receiving a personal visit from the President of The World Calendar Association, International. An outstanding occasion in connection with this visit was the reception and dinner held in the House of Commons, through the courtesy of Mr. Peter Freeman, a member of the British Committee, when leading members of the Working Committee had the rare privilege of discussing World Calendar affairs at first hand with The World Calendar's founder and principal advocate.

International Liaison Officer. During the year 1954 the Liaison Officer traveled nearly 80,000 miles on behalf of the Association, over a period of 132 days, his major trips being to India and the Middle East, New York (twice), and Geneva (three trips).

The main work has been to keep the item of calendar reform on the agenda and, more important, to win a positive decision at ECOSOC. These results were achieved by constant vigilance and full cooperation among all sections of the movement. In visiting India during January and February, direct contact was made with responsible officials in New Delhi who had to plan the procedural side of the question. In Calcutta, an extremely valuable opportunity of a several days' visit with Professor M. N. Saha, Chairman of the Indian Committee on Calendar Reform, was had, thus bringing about direct cooperation between Headquarters and the British and Indian groups. At the same time, in both Calcutta and New Delhi, officials of Egypt were met and various problems affecting Arab support were discussed.

On the return trip through Pakistan and Egypt, discussions with other Ministers and top officials were held and the ground was prepared for the subsequent Geneva meetings. On the return journey, three days were spent in Jerusalem and meetings were held with Daniel Sher, who has done excellent work for The World Calendar Association, International. Many points of policy and of organization were clarified with regard to the Jewish opposition.

This opposition expressed itself vigorously during the opening days of the ECOSOC April session in New York. The Liaison Officer devoted much of his two weeks there to the writing of a point-by-point reply to the World Jewish Congress' attack made at the NGO Committee. A 500-word reply was circulated to all U. N. members, establishing a precedent for NGOs which are on the "register."

Activities at Geneva from the end of June to the beginning of August were too many-sided to be compressed into a paragraph or so. These included arrangements made by Headquarters to bring to Geneva Professor Saha from India and Daniel Sher from Israel. Sir Harold Spencer Jones came from London on a two-day visit. Miss Achelis had herself arrived in Geneva a few days before the ECOSOC session began. The documentation produced was considerable, as well as the number of press communiques, reports of proceedings, and mail during and following the discussions. This was followed by several pamphlets in three languages, made possible with the assistance of Mlle. Houriet of the Multi Office and other helpers.

A press conference and dinner party were arranged at which leading delegates of India, Britain and Yugoslavia were present.

It is gratifying to note that the modified Indian proposal, seconded by Yugoslavia, resulted in unanimous approval by the Council and is now being acted upon by the world's governments.

The Indian delegate arranged for a statement on the economic and social aspects of

the problem, which was actually circulated to the delegates while debating the item at the meeting in the Council Chamber. Following the decision, further interviews were had with the Indian delegates on the manner in which the ECOSOC resolution should be followed up in the subsequent months and the part the Association should play in implementing the action of the Secretary-General.

Also while in New York plans were made for a trip during January by the International Liaison Officer to the Netherlands, Denmark, Norway and Sweden to meet with supporters of The World Calendar and government officials concerned with drafting their respective governments' replies to the United Nations.

United States. The World Calendar Association was deeply grieved at the sudden death 20 May 1954 of Charles D. Morris, Public Relations Counsel to the Association and Editor of its publication, the *Journal of Calendar Reform*. It was through his advice and efforts that the quarterly *Journal* was founded in 1931 to supply information and make available historical records of the movement for an improved calendar. With his wise counsel and brilliant editorial talent, Mr. Morris made a lasting contribution to the cause.

In July 1954, Dr. Clarence R. Decker, a long-time friend of Mr. Morris, was invited to succeed him as consultant to The World Calendar Association, and Editor of the *Journal of Calendar Reform*. Dr. Decker had been an interested advocate of The World Calendar for some time and had appeared with Miss Achelis and Rajeshwar Dayal (Permanent Delegate of India to the U.N.) on a radio program prepared by the United Nations, 24 March 1954, in regard to The World Calendar. Dr. Decker brings to the Association his wide experience as former President of the University of Kansas City and Assistant Director of the Mutual Security Administration for the Far East. He is extended an appreciative welcome.

There have been several changes on the Advisory Committee. In the United States, Dr. Clara B. Burdette, founder of many national women's organizations, died in January of 1954, in San Marino, California. She successfully urged endorsement of The World Calendar by the General Federation of Women's Clubs.

In the membership of the World Advisory Committee, valued friends have been lost. Paul-Louis Hervier, distinguished journalist, whose earnest and effective work for The World Calendar dated back to 1931, died in March. He has been succeeded by Jacques Tirouflet, also a French journalist, who had collaborated with M. Hervier and is thus familiar with the activities of the *French Affiliate*. The Chairman of the Panamanian Affiliate, Dr. Juan Rivera Reyes, passed away in June. Among his many activities he served as secretary of the Panama Society of International Law and as a delegate of Panama to the General Assembly of the United Nations in 1953. Dr. Ricardo J. Alfaro, international lawyer, has kindly agreed to represent Panama as Honorary President of the Affiliate and Panamanian Member of the World Advisory Committee. Dr. Alfaro's cooperation has been continuous since the early days of the Association. Because of the pressure of personal matters, Guillermo Mascarenhas of *Argentina* resigned, and Father Juan V. Monticelli, S.S., a member of the Affiliate for many years, has undertaken the chairmanship. During the past year word was also received of the deaths of Dr. Rafael H. Elizalde, Honorary President of the *Ecuadorean Affiliate*, and Senator Corneille Mertens of *Belgium*, both members of the World Advisory Committee. However, the Committee has in recent months had the important additions of Dr. Carlo Rossi of *Italy*, Director, Ente Nazionale Italiano de Unificazione; and Mr. Daniel Sher of *Israel*, who has been an able spokesman of Jewish support for The World Calendar.

Promotional and education activities have been unusually extensive and continuous throughout the year. The monographs and pamphlets listed on the inside back cover of this *Journal* have been in heavy demand. The new pamphlet, "The World Calendar—Questions and Answers," has been distributed widely and has received much favorable response. This and other literature have been sent in quantity to schools, colleges and universities, including institutes and workshops, throughout the country.

All communication media have been especially generous. Many network as well as local radio-TV programs have presented impressive broadcasts about The World Calendar,

and newspapers, magazines and trade papers have given it wide publicity in stories and editorials, all of which is an encouraging indication that the public is increasingly aware of the urgency of reform. Of special importance in this connection was the article in the 18 December issue of the *Saturday Review*, entitled "Let's End Our Calendar Chaos," by Lacy Donnell. This article was condensed in the January 1955 *Reader's Digest* and published in the following international editions of that magazine: (January) Denmark, English Canada, Italy, Sweden; (February) Australia, Finland, Great Britain, Norway; (March) France, Japan, Portugal, Spain. Affiliates should call the article to the attention of as many persons as possible.

Lectures and discussions before various groups have been sponsored by the Association. When the President's schedule permitted she has been happy to accept speaking engagements. Mr. Edward F. Flynn of Saint Paul, Minnesota, a lecturer on *The World Calendar*, has addressed Rotary, Kiwanis and many other groups across the United States. Mr. Allan F. Ames, Pensacola, Florida, Dr. John R. T. Hedeman, Baltimore, Maryland, and Mr. Jacob E. McColly, Harrisburg, Pennsylvania, have also been in demand as speakers.

Many new endorsements and several re-endorsements of *The World Calendar* have been given in 1954. These have been announced in the *Journal of Calendar Reform*.

Of Time and the Calendar, a new book by Elisabeth Achelis, will be published by Hermitage House on 22 January 1955, a week after the annual meeting. Appreciative credit is given the entire staff of the Association—the late Charles D. Morris; his successor, Dr. Clarence R. Decker; and the staff of Hermitage House—for their wholehearted cooperation in making this publication possible.

United Nations. James Avery Joyce, Honorary Secretary, British Section and Liaison Officer of The World Calendar Association, International, has summarized the general activities of the United Nations in relation to The World Calendar resolution proposed by the Government of India.

It will be recalled that on 1 December 1953 (U. N. Document E/SR. 753, 4 December 1953), "The item entitled 'World Calendar Reform' was inserted in the provisional agenda for the 18th session of the Council by 12 votes to 2, with 4 abstentions." Anticipating the 18th session of ECOSOC, to be held at Geneva 29 June-6 August, The World Calendar Association, International, requested of M. Robert Fenaux, Interim President of the Non-Governmental Organizations Committee, that it be permitted a hearing. The Association, a registered NGO, was granted this courtesy.

Miss Achelis arrived in Geneva several days before the conferences and was joined there by Mr. Joyce. The hearing, originally scheduled for 30 June, was postponed to 7 July because of the many requests for hearings by other NGOs.

A brief statement of the official report of the hearings was published in the September *Journal of Calendar Reform*.

It was a matter of real regret to Miss Achelis that office conditions in New York, resulting from the death of Mr. Morris, obliged her to leave Geneva before the 18th Session of ECOSOC turned to a detailed discussion of The World Calendar reform.

On 28 July, ECOSOC (at the 819th plenary meeting of the 18th session), after some debate, unanimously approved the modified Resolution introduced by India, seconded by Yugoslavia, calling on all governments to present their views on calendar revision to the Secretary-General at the resumed 19th session, in May 1955, so that an international study can be made. This information, together with an editorial concerning it, also appeared in the September 1954 *Journal of Calendar Reform*.

In conclusion, the President of The World Calendar Association, International, is deeply grateful to all who have worked so faithfully and so well to bring The World Calendar to its present promising status. High tribute must be given the Indian delegation which quietly, perseveringly and with wisdom overcame inertia and opposition, achieving the seemingly impossible—unanimous approval of the

calendar resolution. May India be rewarded one hundredfold by experiencing another unanimous acceptance at the resumed May Session of ECOSOC, 16 May 1955, approving a United Nations comprehensive study of the whole question. This will make possible an ECOSOC recommendation leading to the adoption of The World Calendar. Favorable action this spring will pave the way for an expert study committee by the United Nations whereby its recommendation can then be ratified by the governments and the necessary plans be made for adoption of the new calendar in 1961.

Holidays For Happiness

By BRISTOW ADAMS

Professor Emeritus Cornell University and Editor The Cornell Plantations

WORLDSDAY, a new world holiday, the only such day in the calendar—for even New Year's Day is celebrated on different days by different peoples—is provided by the proposed standardization of the calendar, and advocated by the *Journal of Calendar Reform*.

Now, The World Calendar Association, with its plan already approved by seventeen countries, is before the United Nations with a proposal for its adoption on Sunday, 1 January 1961.

The advantages of The World Calendar to every form of human endeavor have been extolled for a quarter of a century. The cogent reasons have been presented by scientists, by bankers, by horologists (time measurers and time keepers), legislators, transportation interests, technicians, mathematicians, astronomers, and other workers without end.

As only a typical, commonplace sort of individual, somewhat disturbed by a world that is obsessed by a feeling of insecurity, of unrest, of possible impending disaster, of a prevalence of vandalism—even of crime—and a pervading sense of local, national, and international neurasthenia, it seems to me that anything which offers a special reason for happiness deserves commendation.

A rational standardization of the recording of time—The World Calendar—offers two days, one at the end of December every year, and another at the end of June every fourth year. These days do not celebrate any event, such as the birthday of a world figure, nor the end of a war, nor the recognition of a group, nor a sense of gratitude for benefits received; they indicate merely the passage of time.

Why not, then, consecrate these days to holidays for happiness—happiness to be celebrated in any way that an individual or a family may choose. It may be for pleasure to be had in rest or recreation, in a contemplation of the good things of life—good news, let's say, or an indulgence in optimism, and a hope for more advantages to follow, or more chances to serve for the good of others.

Only one day a year; another day once in four years? Yet if a Worldsdays were consecrated to the good of One World, there might follow a belief that optimism counteracts some of our thoughts of pessimism—at least for a moment. Might it not establish a more optimistic habit of thought during other and longer moments?

There would be no harm in trying such an idea. "A little leaven leaveneth the whole lump."

THE COIN of the TRIBUTE:The Silver Denarius

By Joseph Guiney

GOSPEL MATT. 22, 15-21. At that time, the Pharisees went and took counsel how they might trap Jesus in His talk. And they sent to Him, their disciples with the Herodians, saying, "Master, we know that Thou art truthful, and that Thou teachest the way of God in truth, and that Thou carest not for any man; for Thou dost not regard the person of men. Tell us, therefore, what dost Thou think: Is it lawful to give tribute to Caesar, or not?" But Jesus knowing their wickedness, said, "Why do you test Me, you hypocrites? Show Me the coin of the Tribute." So they offered Him a denarius. Then Jesus said to them, "Whose are this image and the inscription?" They said to Him: "Caesar's." Then He said to them: "Render, therefore to Caesar, the things that are Caesar's, and to God the things that are God's."

THE LENTEN SEASON governs the lives of 50,000,000 Americans by preparing them for Easter Sunday, the Day of the Resurrection of the Son of God from the tomb. Since time is reckoned from His birth (Anno Domini) surely the life of this extraordinary Man made a greater impact on the calendar than any man that ever trod this earth of ours. History records that Julius Caesar invaded Britain in 54 B.C., and it just so happens that it is possible to show you how the "Coin of the Tribute" actually looked.

This is a silver coin a little larger than a U. S. dime. The image is that of the reigning Roman Emperor, Tiberius Caesar, and the inscription is TI CAESAR, clearly engraved thereon. In 63 B.C. the armies of Pompey went to Jerusalem to settle a dispute that had arisen between two brothers (Hircanus and Aristobulus) and in characteristic Roman fashion Pompey captured Jerusalem, and Israel was now under the thumb of the Roman empire. In the reign of Caesar Augustus (B.C. 31-A.D. 14) the birth of Jesus Christ took place at Bethlehem during a taxation census and this coin would have been minted between 14 A.D. and 30 A.D. to be in circulation at the time that the Pharisees were planning their trick question to show up the Teacher.

There remain a few of these coins in existence today and here is a view of both sides. After nearly two thousand years they are remarkably sharp and clear and well-preserved.



Enlarged front: Showing head and inscription: TI(berius) CAESAR, Son of the Divine (Augustus).



Actual size of silver denarius.



Reverse: LIVIA, wife of Tiberius, seated on the throne with Roman spear in the right hand, olive branch in left. PONTIF(ex) MAXIM(us) = Ruler Supreme.

The skill of the engraver was indeed remarkable, although this particular profile is not as sharply defined as other contemporary heads, and there were many dies of this ruler. Working without acids, magnifying glass, electric power, etc., with nothing but the inherent artistry handed down from father to son, the dies were designed, engraved in detail by hand and with the naked eye, and only lacked the perfection of the circle because of their eccentric, irregular edge. The disc was cast in silver; the die was placed upon it, face down on the disc and then struck with a hammer, sometimes not in perfect position.

Nearly two thousand years have slipped by. People in general regard the Son of Man as a nebulous, far-off Force, behind the Blue curtain, who keeps busy listening to the prayers and appeals of countless thousands pleading to be heard.

Let's get down to earth! This coin takes Him out of the indefinite and puts Him into the Definite—much nearer to home. "Show Me the coin of the Tribute." What more do you want?

When men are very young they think of their future—but it's a long way off and there will be lots of time. Later on they marry, raise a family,

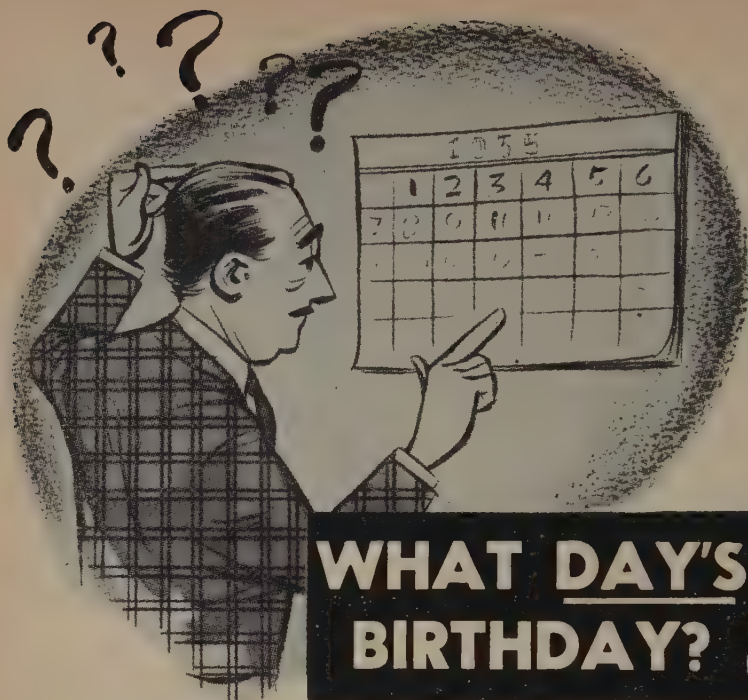
buy a home and become a part of America because only the home-owner is the bulwark of the nation, not the renter or the floater. He thinks of the future more often, especially the payments for the house; the education of his children, etc. Another cycle of years; the children are slipping away, one by one; retirement is close by, he thinks of the future, every day, ALL the time. For him the calendar is running out, the sands are fairly FLYING in the glass, the FUTURE is shaking hands with him. Once again in his hope and his despair he turns to that Eternal Man who is his only consolation and who stood in a crowd of His enemies that day in Judea and said calmly: "show Me the coin of the Tribute." So they offered Him a denarius! Remember that the Pharisees in presenting to him a coin with Caesar's image, were answering their own question by acknowledging the legality of the coin. The "money changers" were daily in the Temple exchanging Roman into Jewish money and vice versa. Taxes or tribute were only legal if paid in Roman coin.

Then came those deathless words, recorded by St. Matthew, that stupefied the schemers, and re-echoed down through twenty centuries of time—time that bears the designated and identifying mark of His visit to Earth by dividing and cleaving the eventful dates of history as with a golden axe to mark a starting point in the Calendar of Time, either B.C. or A.D.

Look well upon the silver denarius of Tiberius Caesar. It was the coin for a day's pay for the Roman soldier, or a day's labor for the agricultural worker. It is a solid connection between the Man and all men. He was doing business then and He is doing business now and forever.

Incidentally, remember how the original Julius Caesar ended up? His chums really ruined him one March afternoon. Four hundred years later the power that had held the world in its grasp and ruled the legions and the golden eagles of Rome, went into oblivion with the last Caesar. Down the corridors of time, new conquerors flowered and died, each in their appointed hour on the pages of history, but the denarius lived on to tell the world its story—how a disc from its die nestled in the palm of the gentle Nazarene as He answered the double-edged question that was designed to trip Him.

Little men with little minds. Hark back to the Child who confounded the wise men and the doctors in the temple—the Man from Whose birth time was reckoned, the Master with the Coin of the Tribute nestling snugly in His palm, and the entire world in His kindly keeping.



WHAT DAY'S YOUR BIRTHDAY?

BET YOU DON'T KNOW!

(Condensed from the Pepper Pod, a magazine published by and for the 16,000 employees of Walgreen Drug Stores)

HAD to look at the calendar, didn't you? . . . to find out whether your birthday will fall on a Monday, Tuesday, or some other day this year. That's one reason why in a few years we could possibly be running our lives by a new kind of calendar, the kind that will be the same every year.

Surprising? Sure it is, for we've always taken our calendar for granted as if it had been tacked up for us in the Garden of Eden. Truth is, man's been trying to figure out a *better* calendar for about nine thousand years. He thought he had it when he timed his calendar to the earth's trip around the sun. But our globe's $365\frac{1}{4}$ -day round-trip schedule gave him a rough time because he pegged his calendar at 365 days. That $\frac{1}{4}$ -fraction kept bobbing up like a bad penny. So it got nailed down once and for all with a leap year—by adding an extra day every

fourth year to keep us in step with Mr. Sun. . . .

However, our Gregorian calendar has its shortcomings, too. And a *new* calendar idea now is offered by an international association which has been working on it for 24 years. Called *The World Calendar*, it's similar to our present calendar, but corrects such defects as "The Wandering Weekday." Since 7 days of the week don't divide into our calendar's 365 days evenly, the odd day (365th) always has to be "borrowed" from the next year. (That's why your birthday and other holidays move up one day of the week per year.) Also, our calendar has irregular totals of days per month and unequal yearly quarters.

These calendar quirks hamper efficient operation of business, finance, government and law say World Calendar sponsors, not to mention raising hob with

household budgets and holiday arrangements.

How close is The World Calendar? Last summer the United Nations voted unanimously to present it to over 80 governments. And it looks like opinions will be favorable. To begin smoothly, it should start on a year when our present calendar begins on a Sunday. And right now the most practical target date seems to be 1961.

Reaction of many people to this new calendar is enthusiastic—even to the young lady who observed with a gleam in her eye that: "That Leap-Year Day in June will give us an extra 24 hours for June weddings!"

Labour, Employer Groups Support The World Calendar

(Labour Gazette, December, 1954, Department of Labour, Canada)

Member-nations of the International Labour Organization have been advised by the Canada Branch of the ILO that the country's major labour organizations and employer associations have this year asked the Government to try to advance the adoption of The World Calendar.

Washington Dispatch

Pan American's Slip Shows

Washington (UP)—Pan American Airways ordered 50,000 calendars and had mailed out over 800 of them before some sharp-eye discovered that the printers had forgotten to stuff in the month of September. As Mike Flynn, the public information man remarked, "There went one-third of the fall."

The Calendar

By Richard Brinsley Sheridan

January snowy; February flowy; March blowy.
April show'ry; May flow'ry; June bow'ry.
July moppy; August croppy; September poppy.
October breezy; November wheezy; December freezy.

The World Calendar

By Herbert Wilkinson, De Witte, Iowa

Thirty days hath September,
August, March and November,
February, May and June,
And the same for December
All the rest have thirty-one;
Leapyear Day must follow June,
Worldsday means the year is done.

The Calendar

By the grade-school children in the classes of Mrs. Beulah W. Taylor, Pierce City, Missouri

Thirty-one, thirty, thirty,
Four times makes a year,
With Worldsday coming at the end
In the season of good cheer!

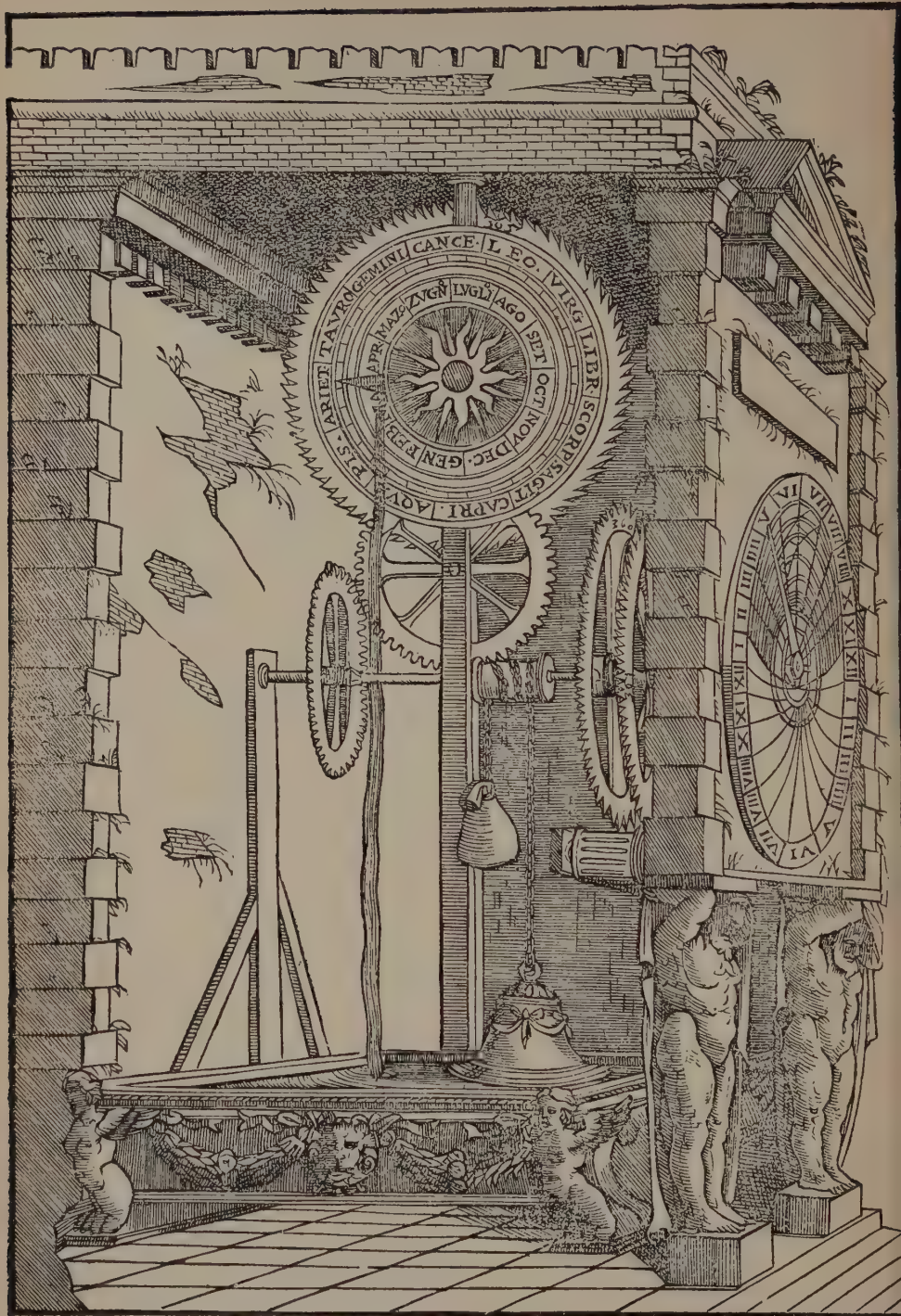
'Twixt June and July
For one year in four.
Leapyear is added
To even the score!

Our Mossy Calendar

A letter to the New York Daily News

Brooklyn: Those who desire calendar reform via the proposed World Calendar should urge Secretary Dulles to vote for calendar revision next May. Our main obstacle to this improvement is apathy. Why must reforms come the hard way?

William G. Hodgens



Renaissance Water Clock and Calendar (illustration from Pollionis, *Holzschens Uhrmechanismus Architectura*, Venice, 1567, page 326).

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AFFILIATES AND NATIONAL ORGANIZATIONS

ARGENTINA: The World Calendar Association, International, Affiliate, Rev. Fr. Juan V. Monticelli, S.S., Chairman, Calle Adolfo Berro 4050, Buenos Aires.

AUSTRALIA: The World Calendar Association, International, Affiliate, Prof. A. D. Ross, Chairman; John K. Lavett, Deputy Chairman, Box 4256 G.P.O., Sydney, N.S.W.

BELGIUM: The World Calendar Association, International, Affiliate, Dr. F. Moreau, Chairman, 115 av. George Bergmann, Brussels I.

BOLIVIA: Comité Boliviano del Calendario Mundial, Dr. Gaston Barrera, Chairman, La Paz University, La Paz.

BRAZIL: The World Calendar Association, International, Affiliate. (The Affiliate is at present without a Chairman due to death of Rear Admiral Radler de Aquino.)

CANADA: The World Calendar Association, International, Affiliate, A. J. Hills, Chairman, Room 31, 102 Bank St., Ottawa.

CHILE: Comité Chileno del Calendario Mundial, Prof. Alberto Cumming, Chairman, Calle Manuel Rodriguez, Santiago.

CHINA: The World Calendar Association, International, Affiliate, Dr. Ch'ing-Sung Yü, Honorary President; Dr. Chu Chia-hua, Chairman, 15 Chuan Chow St., Taipeh, Taiwan.

COLOMBIA: Comité Colombiano del Calendario Mundial, Dr. Belisario Ruiz Wilches, Chairman, Observatorio Astronomico Nacional, Apartado No. 2584, Bogotá.

- COSTA RICA:** The World Calendar Association, International, Affiliate, Don José Borrás, Chairman, "La Prensa Libre," Aptdo. Postal 1533, San José.
- CUBA:** The World Calendar Association, International, Affiliate, Dr. Elias Entralgo, Chairman, Havana University, Havana; Dr. Salvador Massip, Adviser.
- DOMINICAN REPUBLIC:** The World Calendar Association International, Affiliate, Barney N. Morgan, Chairman, Box 727, Ciudad Trujillo.
- ECUADOR:** The World Calendar Association, International, Affiliate, Dr. Jorge Egred P., Chairman, Astronomical Observatory, Apartado 165, Quito.
- FRANCE:** The World Calendar Association, International, Affiliate, Senateur Justin Godart, President; Jacques Tirouflet, Chairman, 1, Rue Bénouville, Paris 16.
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- GREAT BRITAIN:** The World Calendar Association, International, Affiliate, Lord Merthyr, Chairman, 20 Buckingham St., London W.C. 2.
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- INDIA:** Committee on Calendar Reform, Prof. M. N. Saha, 92, Upper Circular Rd., Calcutta.
- ISRAEL:** Representative, Daniel Sher, 51 Gaza Road, Jerusalem.
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- NEW ZEALAND:** The World Calendar Association, International, Affiliate, Dr. I. L. Thomsen, Chairman, Carter Observatory, Wellington, W. I.
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- PERU:** The World Calendar Association, International, Affiliate, Don Luis Montero y Tirado, Chairman, Av. Uruguay 305, Lima.
- PHILIPPINES:** The World Calendar Association, International, Affiliate, Ramon Caro, Chairman, 116 Padre Faura, Manila.
- POLAND:** Polish Committee for Calendar Reform. (The Committee is at present without a Chairman due to the death of Mr. Jakiel.)
- SALVADOR:** The World Calendar Association, International, Affiliate, Don Napoleon Viera Altamirano, Chairman, "El Diario de Hoy," San Salvador.
- SPAIN:** The World Calendar Association, International, Affiliate, Rev. Father Antonio Romañá, S.J., Chairman, Observatorio del Ebro, Tortosa.
- SWITZERLAND:** The World Calendar Association, International, Affiliate, Prof. Emile Marchand, Chmn., 2, Genferstrasse, Zurich.
- TURKEY:** The World Calendar Association, International, Affiliate, Dr. I. A. Dereoglu, Chairman, Beyoglu, Istiklal Caddesi 485, Istanbul.
- UNITED STATES:** The World Calendar Association, Inc., International, Affiliate, Elisabeth Achelis, President, 630 Fifth Avenue, New York 20.
- URUGUAY:** The World Calendar Association, International, Affiliate, Prof. Alberto Reyes Thévenet, Chairman, Liceo "Hector Miranda," Calle Sierra 2274, Montevideo.
- YUGOSLAVIA:** Yugoslavian Committee on Calendar Reform. (Without a Chairman due to the death of Mr. George Curcin.)

READING MATERIAL

The following material may be obtained on request from The World Calendar Association, 630 Fifth Avenue, New York 20, New York:

BOOKS

Time Counts, by Harold Watkins. London 1954.

Consider the Calendar, by Bhola Panth. New York 1944.

MONOGRAPHS AND PAMPHLETS

The World Calendar—Questions and Answers. A 16-page summary of the most significant questions concerning the value of The World Calendar and the prospects of its universal adoption.

The Present Calendar and Its Effects on American Business, by Professor John M. Firestone, College of the City of New York, in cooperation with the Controllers Institute of America.

Clarifying Calendar Reform, by Elisabeth Achelis.

Calendars Old and New, by Sir Harold Spencer Jones.

The World Calendar and Religion. The World Calendar Association, Inc.

Calendar Reform in India, by Professor M. N. Saha, F.R.S.

Israel's Calendar Confusions, by Sulamith Rogoff.

Time for Action, Says France, by Abbé Chauve-Bertrand.

Active Interest in Ireland, by Professor John J. O'Meara.

A Reformed Calendar, by Lord Merthyr.

Now Is the Time, by James Avery Joyce.

Calendar Reform and the Seven-Day Week, by Elisabeth Achelis, James Avery Joyce and Daniel Sher.

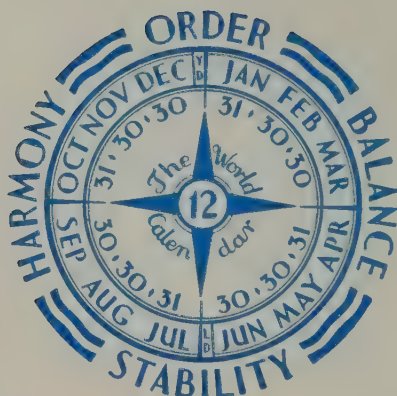
La Réforme du Calendrier Devient de plus en plus Vitale, by Jacques Tirouflet.

Calendar Reform Before the United Nations:

1. Basic Facts: Essential Dates, Excerpts, References.
2. 1947 Memorandum by Secretary General Trygve Lie.
3. Reply to the World Jewish Congress.
4. Jewish Support for The World Calendar, by Daniel Sher.
5. Economic and Social Advantages of The World Calendar, by James Avery Joyce. (Also in French and Spanish.)
6. Abridged Report of ECOSOC Discussion.

Journal of Calendar Reform. The official quarterly journal of The World Calendar Association, containing historical information and current developments throughout the world. Back issues for the past twenty-five years are available in the leading libraries. Current numbers supplied on request.

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THE WORLD CALENDAR FOR ONE WORLD

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Journal of
CALENDAR
REFORM

Calendar Reform at United Nations
How Governments Stand
Press Protests U. S. Position
The Year in Ancient Egypt
The First Neolithic Calendar

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June 1955

THE WORLD CALENDAR

1ST
QUARTER

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

2ND
QUARTER

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

3RD
QUARTER

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

4TH
QUARTER

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

W (Worldsday, a World Holiday) equals 31 December (365th day) and follows 30 December every year.

W (Leapyear Day, another World Holiday) equals 31 June and follows 30 June in leap years.

In this Improved Calendar:

- Every year is the same.
- The quarters are equal: each quarter has exactly 91 days, 13 weeks or 3 months; the four quarters are identical in form.
- Each month has 26 weekdays, plus Sundays.
- Each year begins on Sunday, 1 January; each working year begins on Monday, 2 January.
- Each quarter begins on Sunday, ends on Saturday.
- The calendar is stabilized and made perpetual by ending the year with a 365th day following 30 December each year. This additional day is dated "W," which equals 31 December, and called Worldsday, a year-end world holiday. Leap-year Day is similarly added at the end of the second quarter. It is likewise dated "W," which equals 31 June, and called Leapyear Day, another world holiday in leap years.

Journal of

CALENDAR REFORM

June 1955

VOLUME XXV

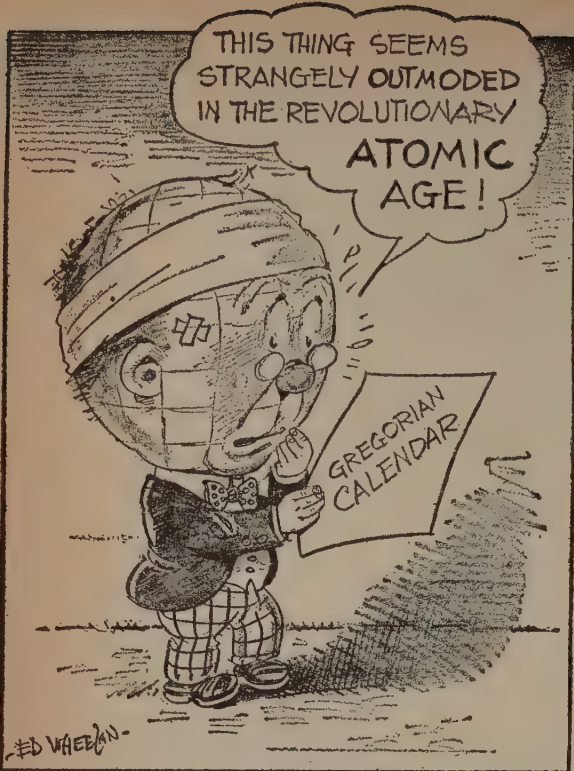
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Lawrence R. Decker, Editor

Linda Halsted, Associate Editor

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Ed Wheelan in New York Daily News, 31 May 1955

We Play Reactionary

Hartford (Conn.) Courant

ALTHOUGH it cannot be said that there has ever been an expression of popular opinion on calendar reform, our State Department has put a knife in it by its recent statement to the U. N. In a terse letter to the Secretary-General it said that "this government" is opposed to any change in the present calendar, and that any further study "would serve no useful purpose."

It would be interesting to know when and who, acting for "this government" decided that calendar reform was useless. . . . Certainly if the advantages set forth in the new calendar were understood by the majority of the American people, they would doubtless give it a great deal more consideration than has been allotted it by the State Department. . . .

Those who attach religious significance to a date rather than an incident are involved with form, not substance. And the United States likes to think of itself as a progressive nation. . . .

Just Who Belongs on That "Backward Nations" List?

Mason City (Iowa) Globe-Gazette

AS one of our exchange editors suggests it would be interesting to know just who was in our State Department who decided that the proposal before U.N. to modernize our calendar shouldn't even be given further study.

By every test that can be applied—except that of superstition by little groups who accept the Gregorian calendar with their own special interpretations—The World Calendar would bring order out of chaos in the all-important subject of measuring time.

A score or so of the nations holding membership in U.N. have given unofficial endorsement to the plan. A long list of business and professional organizations and thousands of religious leaders have placed their seal of approval on it.

And now the spokesman for the great United States, supposedly a leader in forward-looking thought and action in our world, comes through with this asinine comment:

"The United States protested today that the United Nations should be able to find better things to do than tinker with the calendar."

There's a reminder in this course of action that Russia was something more than three centuries in making up her mind to go along with the Gregorian calendar following its adoption in 1582.

The proposal now before the United Nations, incidentally, was sponsored by India. Our gratuitous insult therefore went to India and to the many other nations back of The World Calendar.

Secretary Dulles—or whoever it was that wrote the ticket in this matter—seems to be asking for a new classification of what once was referred to as "the backward nations."

One shudders to think that this is a sample of the vision being brought to bear by our State Department on the other problems facing the world.



Editorial

World Calendar Reform at the United Nations

A GAIN calendar reformers are indebted to India—and to the other members of the United Nations Economic and Social Council who supported her—sustaining the cause of world calendar reform.

On 16 May, the Council decided to defer consideration of reform to next spring in order to permit time for more Governments to study the subject and to express their views. Thus far only some thirty out of eighty Governments have replied to the Secretary-General's request. That more replies were not received should not be regarded as lack of interest but rather as indicating that the time allowed was too short for adequate consideration of this important matter.

Notwithstanding strong opposition led by the United States and Great Britain, stemming largely from minority but highly organized religious groups, the Indian motion was carried by ten votes to six with one abstention.

The Indian motion was supported by Argentina, Czechoslovakia, Dominican Republic, Ecuador, Egypt, Turkey, U.S.S.R., Venezuela and Yugoslavia. It was opposed by Australia, China, Netherlands, Pakistan, United Kingdom and United States. France abstained.

The United Nations *Provisional Summary Record* of the discussion will be found on page 69.

It is encouraging that opposition, strong as it has been, has not prevented The World Calendar from advancing step by step in the United Nations under the leadership of India who put the plan before ECOSOC in October 1953. Yet one cannot but regret that on this universal and progressive movement for improving the civil calendar English-speaking nations are in great measure taking a retrogressive stand. Progress is not made by looking backward or standing still. It is rather

through the forward look of governments and peoples that advances are made and problems resolved.

Nor is the subject one for this or that particular religious group. An improved civil calendar belongs to the whole world irrespective of particular beliefs. A former statement by the Holy See, forward-looking then, is pertinent now:

The Holy See declared that it made no objection but invited the civil powers to enter into an accord on the reform of the civil calendar, after which it would willingly grant its collaboration in so far as the matter affected religious feasts.

A more recent statement a year ago in the *Osservatore Romano* expresses a similar opinion:

The Church has no reason to oppose in principle a modification of the present calendar. If there were a general desire for reform, motivated by serious requirements of the economic and social life of the peoples of the world, the Catholic Church would not fail to consider the question. . . .

These two statements distinguish calendar reform as a civil movement in purpose, scope and character from the stabilization of feast and holy days, which belongs in the realm of religion. This distinction is now being clouded by opponents who fail to understand that calendar reform, like Standard Time, is a universal matter removed from religious sectarianism, national prejudice, racial bias or personal interest.

It is thus highly significant that the World Calendar Reform is before the United Nations, where a matter of such international import properly belongs. Its future there now devolves upon the States Members and non members, whose attitudes, in turn, will be influenced in large measure by public opinion.

The overall work, therefore, becomes of the utmost importance in the months ahead. It is hoped that all who believe in world calendar reform will take advantage of the opportunity which the year's deferment gives to urge their respective governments to take an affirmative stand for an *international study* by the United Nations and to use all possible contacts to persuade others and particularly the government members of ECOSOC to support this worthy objective—to determine the best civil calendar for man's daily use.

In this connection it must be remembered that the membership of ECOSOC rotates. Next year, in 1956, the terms of such loyal supporters as India, Yugoslavia, Venezuela and Turkey expire. It is important, however, that they continue to participate in the Council's deliberations on calendar reform, as permitted in the rules of procedure. It is equally important that Governments newly-elected to the Council be fully informed of the advantages of World Calendar Reform.

All who favor The World Calendar and who have worked to attain its objective can take satisfaction in the advances made. The prospect is now reasonably assured that the United Nations will wish to pursue World Calendar Reform to its inevitable conclusion—recommendation for world adoption of The World Calendar.

UNITED NATIONS ECONOMIC AND SOCIAL COUNCIL



PROVISIONAL

E/SR.848
18 May 1955

ORIGINAL: ENGLISH

Nineteenth Session (Second Part)

Held at Headquarters, New York,
on Monday, 16 May 1955, at 10:50 a.m.

PROVISIONAL SUMMARY RECORD OF THE 848TH MEETING

Mr. LALL (India) proposed that consideration of the world calendar reform (item 21) should be postponed until the Council's twenty-first session. The Secretary-General had asked the Governments of eighty States to communicate their views on the question. So far, only thirty had replied. Postponement of the item might induce more Governments to transmit their comments.

Mr. PEREZ-PEREZ (Venezuela), Mr. SOBOLEV (Union of Soviet Socialist Republics), Mr. STANOVIK (Yugoslavia) and Mr. LOUTFI (Egypt) supported the proposal.

Mr. KOTSCHNIG (United States of America) felt that Governments had had ample time to transmit their views. Moreover, on the basis of previous experience in the United Nations, thirty was somewhat above the average. Those Governments which had failed to reply were probably not interested in the question.

Mr. SCOTT FOX (United Kingdom) and Mr. FORSYTH (Australia) agreed.

Mr. LALL (India) observed that, while the Council could not expect to receive replies from all the eighty Governments, less than half that number had responded to the Secretary-General's request. Moreover, a number of Governments were presumably awaiting the reactions of the Holy See, which was at present considering the question, before making their views known.

Mr. MIR KHAN (Pakistan) said that his Government would oppose any change in the calendar, on religious grounds, as would probably the Governments of all Moslem States. It might perhaps be wise to delete the item from the Council's agenda.

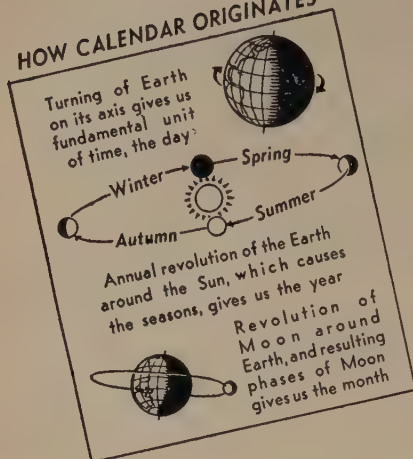
The PRESIDENT suggested that if the Council adopted the Indian proposal it should instruct the Secretary-General to communicate its decision to the Governments of the States which had not yet replied to his earlier communication.

Mr. LALL (India) accepted the suggestion.

The Indian proposal was adopted by 10 votes to 6, with 1 abstention.

Should We Adopt New World Calendar?

HOW CALENDAR ORIGINATES



Approach of a new year is good time to think of the calendar. Holidays now fall on different days each year. Many believe we should have a new, perpetual calendar.

Calendar is designed to keep a record of these things. Proposed calendars have holidays fall on same days each year.

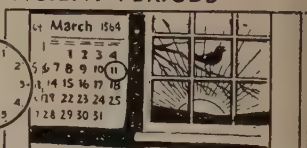
HOW PRESENT CALENDAR DEVELOPED SINCE ANCIENT PERIODS



Our calendar began with the ancient Egyptians about 300 B.C. They introduced Leap Year by adding one extra day each fourth year so the average length of the year was $365\frac{1}{2}$ days.



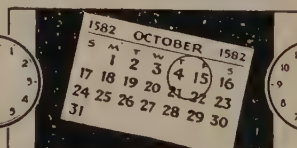
In 45 B.C., the Romans decided to do something about calendar. Julius Caesar brought the astronomer Sosigenes from Egypt to aid in designing the Julian calendar. It had $365\frac{1}{4}$ days.



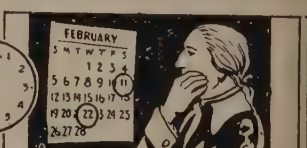
Caesar's year was 11 minutes too long, and after 1,600 years the Julian calendar was nearly two weeks wrong. Spring began on March 11 instead of March 21, and Easter was arriving late.



To keep Easter in its place at the beginning of spring, the church found it necessary to change the calendar. This was done under Pope Gregory XIII. It became present Gregorian calendar.

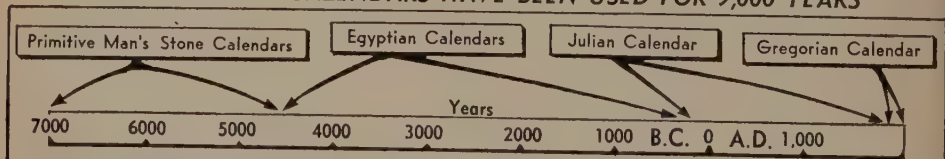


In 1582 Pope Gregory brought spring back to March 21 by dropping 10 days from Oct. 4. This was accepted by Catholics. Many Protestant and Greek Orthodox nations rejected it.



It was 200 years before Britain and colonies accepted this calendar. Meanwhile another day had been gained so 11 days were dropped. Washington's birthday shifted from Feb. 11 to 22.

SOME FORM OF CALENDARS HAVE BEEN USED FOR 9,000 YEARS



We divide time before and after the birth of Christ. In "B.C." (Before Christ), count backward. In "A.D." (Anno

Domini), count forward. We have used the Gregorian calendar less than 200 years. Many believe it is inefficient.

(World Calendar is sponsored by the World Calendar Assn., Inc., 630 Fifth Ave., New York)

HOW GOVERNMENTS STAND

By A. J. Hills

Assistant Director General, The World Calendar Association, International

THE deferment for a year by the Economic and Social Council of the United Nations of consideration of World Calendar Reform makes timely a review of the position taken by countries on this question, not only at the opening meeting of the Council's resumed 19th Session on 16 May of this year, but on other occasions when governments under the auspices of international organizations have had the opportunity to express their views. Some comments on the replies will be made. The review will cover the quarter century during which The World Calendar Association has been in existence.

The most recent *vote* on the subject of World Calendar Reform was limited to the 18 members of ECOSOC on the motion of India. The 10 to 6 result is referred to in this issue of the *Journal* (page 69).

Of the nations responsible for giving more time for governments to send in replies, India, as proposer of the motion and as leader of the movement for reform since presenting the subject for consideration by ECOSOC, is entitled to first and honorable mention. As in some other cases this shows a conversion to the cause: in 1937, when the League of Nations conducted an enquiry, India was opposed.

Yugoslavia, acting jointly with India in presenting a draft resolution in Geneva in July of last year, was one of the four nations ready to vote for a perpetual calendar in 1931.

Venezuela, seconding India in this latest action, 16 May, had no observation to submit in 1937, but was in favor of discussion of the subject in 1949.

Turkey was in favor of The World Calendar in 1937 and supported India in the recent vote.

Argentina's support is particularly pleasing since in 1937 this country was recorded as opposed to the plan.

Egypt expressed neutral views at Geneva last year. It is a matter of satisfaction that, although not filing an official reply, this father of calendar reform supported India.

Czechoslovakia, one of the countries unable to make a decision in 1937, expressed support in 1948.

The Dominican Republic did not make a formal reply but supported India in the vote.

The support of the Union of Soviet Socialist Republics was in line with views expressed at Geneva last July by a country that since 1918 has not hesitated to make calendar changes considered to be advantageous.

It is not known why France abstained from voting; her reply was to the effect that France wanted to take note of the position taken by other governments.

In 1937 the United States had no observation to submit to the League of Nations. The United Kingdom of Great Britain and Northern Ireland then considered the proposed reform premature. This, be it remembered, was nine years after passage in England of the Act providing for the stabilization of Easter, which has remained dormant.

It may also be recalled that the representative of the United States in 1949 moved that the last item on the list, "Plan for the reform of the calendar," proposed by Panama as an item on the provisional agenda of the United Nations General Assembly, be postponed to a later session; that it was the representative of the United Kingdom who seconded the motion on the plea of an "overcrowded agenda." This motion was not put. The Chairman instead asked for a show of hands of those in favor of retaining the item. In favor were Canada, China, Chile and Venezuela. Against, besides the United States and the United Kingdom, was Denmark. The Philippines Chairman voted with these three, making a tie vote of 4 to 4 and thereupon declared the item postponed for lack of majority.

Abstaining were the U.S.S.R., Poland, Pakistan and Brazil. Greece and France were absent.

Australia had no observation to submit in 1937. China, however, approved the calendar reform plan at that time, and supported the idea of discussing the subject in 1949, but replied as not in favor "at this time."

The Netherlands (in the name of Holland) was opposed to calendar reform in 1937. Their reply in the present instance was to the effect that the time was not appropriate—that introduction of a new calendar would not seem desirable "until a considerable part of the population is insisting on such a step."

Pakistan opposed on religious grounds, stating that the dislocation of Friday would be unacceptable to Muslims. It may here be observed that other countries where Mohammedanism prevails supported calendar reform in 1937 and have done so since. Afghanistan and Turkey approved in principle in 1937, and Saudi Arabia in 1948 expressed willingness to accept The World Calendar for civil purposes if the Western World adopted it. Syria in the same year signified her support.

In addition to the above comments on the voting at the recent meeting, with some references to earlier expressions, it may be proper to refer to the fact that besides those mentioned, Brazil, Chile, Greece, Mexico, Norway, Panama, Peru, Uruguay, Hungary, Esthonia and Spain recorded themselves as favoring calendar reform when the League of Nations sent out a questionnaire in 1937. Peru introduced the subject of calendar reform to ECOSOC in 1947 and Panama proposed calendar reform as a subject for the General Assembly's agenda in 1949.

Haiti was in the opposing group of 1937; so was Sweden which still opposes calendar reform. Romania is also opposed. Ecuador, Latvia and Lithuania felt unable to make a decision in 1937, and have not been heard from since.

Among the group sending in unfavorable replies to the present request is Burma, on the grounds that the specific proposal is against her religious traditions. Iraq's opposition is against a specific plan.

The views of Israel are, of course, well known. In this instance these include the position on the specific plan that "under present circumstances such a reform would have no chance of universal acceptance." Much matter is included on the alleged "unbroken continuity of the week."

New Zealand opposes calendar reform as unnecessary and ill-advised at this time, having regard to "strong opposition of many faiths."

The Philippines opposes as in 1949 when Panama's proposal was made. Her reply contains the views that "there are no compelling reasons to justify the reform of the Gregorian calendar."

The Union of South Africa states that public opinion has not disclosed any great interest in the proposed reform of the calendar, whereas there is opposition on religious grounds.

Of the non-member states which have not yet adopted a favorable view are Portugal and Finland.

Among the replies in various ways favorable is that of Canada: "The Canadian Government has come to the conclusion that a study, under the auspices of the Economic and Social Council, of the possibilities of calendar reform might prove useful." This reply is in line with the suggestion of the delegation of India and with the resolution. Canada was recorded as in favor of calendar revision as far back as 1931, and was prepared to have the matter discussed when Panama proposed the subject as an item for the agenda of the General Assembly in 1949.

It should be mentioned here that Switzerland and Greece were in favor of the 12 months equal quarters calendar in 1931. Greece again was for reform in 1937. Switzerland, however, in the latter year was unable to make a decision and now seems to have taken an adverse view. Switzerland gave the subject considerable study for the International Chamber of Commerce.

There are a number of countries which refer in their replies to the attitude of the Holy See and there was a feeling that others were awaiting the reactions of the Vatican before making their views known. The decision of 16 May 1955 provides for enquiry as to the views of the Holy See. Those who made reference to this were Chile, Colombia, Costa Rica, Monaco and Paraguay—but Chile, it will be remembered, has been a staunch supporter of calendar reform.

Besides those mentioned, other nations whose replies indicate they are not opposed to further study are Luxembourg, Ireland, Italy and Japan.

Liechtenstein wrote to the Association expressing support in a letter which was forwarded to the Secretary-General. The President of Korea wrote heartily supporting calendar reform.

Appreciation of the reply of Thailand should be recorded. It read: "The Government of Thailand are in favour of the proposed Reform."

While Ethiopia is not shown as having sent in a reply to the recent enquiry,

it is felt proper to recall that in 1949 a letter from the Director of the Imperial Ethiopian Library stated, in part: "His Imperial Majesty has been pleased to instruct the Ethiopian Delegation to the United Nations to make a closer study and take interest in the adoption of The World Calendar as proposed by the Association."

Belgium has taken part in committee discussions helpfully, as also has Cutchin, Germany (West) put in a reply which perhaps to a greater extent than any other gives consideration to the merits of The World Calendar but concludes that on account of present religious opposition the time for reform has not yet arrived.

The situations in chronological order included in this review are listed below:

<u>Date</u>	<u>Auspices</u>	<u>Occasion</u>
1931	League of Nations	Meeting
<i>4 nations were recorded as being in favor of a revision of the calendar.</i>		
1937	League of Nations	Questionnaire
<i>14 nations approved in principle of The World Calendar.</i>		
1947	U.N. ECOSOC	Proposal
<i>The World Calendar Reform plan put before ECOSOC. Secretary-General instructed to report.</i>		
1948	Individual Governments	Expressions
<i>3 additional approvals (1 of these conditional) to 1937 endorsements.</i>		
1949	U.N. General Assembly	Proposal
<i>Plan for reform of the calendar postponed on tie vote 4 to 4 with 4 abstentions 2 absent.</i>		
1953		
Oct.	U.N. ECOSOC	Proposal
<i>World Calendar Reform embodying The World Calendar.</i>		
1953		
Dec.	U.N. ECOSOC	Meeting
<i>Subject retained on agenda by vote of 12 to 2 with 4 abstentions.</i>		
1954		
July	U.N. ECOSOC	Meeting
<i>Unanimous decision to request governments to reply on desirability of calendar reform.</i>		
1955		
May	U.N. ECOSOC	Meeting
<i>Council votes 10 to 6 to give additional year for nations to send replies.</i>		

This enumeration of 62 countries which, within the last 25 years in one way

or another, have given some expression of views or indication of position on the subject of calendar reform does not include 13 member governments of the United Nations and 10 non-member governments which up to date are not reported to have indicated any stand on the subject. *The member nations are:* Bolivia, Byelorussian S.S.R., El Salvador, Guatemala, Honduras, Iceland, Indonesia, Iran,* Lebanon, Liberia, Nicaragua, Ukrainian S.S.R., Yemen. *The non-member nations are:* Albania, Austria, Bulgaria, Cambodia, Ceylon, Hashemite Jordan, Laos, Nepal, Vietnam, Libya.

It may therefore be recorded that commencing with 4 nations in 1931 who were all who felt ready to express themselves in favor of calendar reform, the number of nations which now may be classed as not against revision of the calendar—or at least prepared for an examination of its possibilities—has grown to 38, which of course includes a number of strong advocates of calendar reform.

In 1937 six nations were opposed to The World Calendar plan. Thirteen more nations have expressed disapproval since, but 2 who opposed in 1937 are now supporters, so that only 17 have expressed definite opposition.

Some expressions are related to specific plans. Reversals of views have gone both ways: 2 formerly in favor of calendar reform are now opposed.

The almost complete absence in the replies of any criticism of The World Calendar on its merits is truly remarkable. Even where a criticism has been attempted, it has been admitted that religious opposition influenced the opinion expressed.

One reply denies that the proposed calendar is more “scientific” alleging that “the deciding quality is the average length of the year.” But surely science is not limited to astronomy, and the mathematically more accurate divisions of the year which The World Calendar gives cannot be disregarded.

The World Calendar is advocated as a *civil* calendar for acceptance by all civilized countries. It can only be made effective by first being accepted by the United Nations. As Great Britain’s Astronomer Royal has so well said: “There is need, however, in each country for a campaign to explain its advantages and merits, its convenience and simplicity.”

That is the task before all who desire calendar reform. Between now and the meeting next spring of the Economic and Social Council this work should be continued with unflagging zeal in member countries of the United Nations, and in non-member nations. The extension of time for sending in replies provides an exceptional opportunity to advance our objective.

It should be remembered and stressed with governments which have not yet replied that it is not at this time necessary for governments to support any particular plan. It is sufficient for governments to reply that they are in favor of a *study* being made of the desirability or possible advantages of World Calendar Reform.

* *Editor’s Note:* Since this article was written, Iran’s reply, advocating study of calendar reform and proposing its own reform, has been received by the United Nations.

Calendar Change, Long-Seen Needed, Comes Up in U.N.

By SANFORD MARKEY

(Alliance Review, Alliance, Ohio, and other newspapers)

CIRCLE 16 May with a big, eye-arresting mark, for there may not be many more days like that.

For on 16 May, the Economic and Social Council of the United Nations will open its session with consideration of changing the present calendar.

It's not a new fangled idea. The need for calendar change has been recognized as far back as 1834. However, not until last summer, when the 18-nation Council asked all governments to study the problem of calendar reform and report back for the 16 May meeting, did the possibility of the creation of a new World Calendar take a major forward step.

Proponents of The World Calendar say this would ease keeping of records, make comparative statistics more accurate for major business establishments, such as insurance companies, department stores, railroads, etc.

What's more, business leaders, including heads of department stores, railroads and manufacturing associations, not only have endorsed the move as in keeping with modern

tempo and needs, but as a means of effecting savings in operations that could be passed on to the consumer. . . .

Those persons born on 31 December would have birthdays on "Worldsday," and the whole world could join in the celebration. Those born on 29 February would have birthdays every year, instead of just once in a Leap-year Day.

Calendar changes, to bring the keeping of records current with changes in time, have long been studied by great leaders. Pope Gregory and, before him, Julius Caesar realized the need of making the calendar of their day current, and so brought the calendar up to date. . . .

In 1834, an Italian priest, Abate Marco Mastrofini, made a start toward a world calendar when he suggested the 365th day of each year be regarded as an extra day.

In 1923, the League of Nations discussed the need for calendar changes in view of modern business and economic factors. By 1928 at least 185 different plans were advanced, but [in 1937] all were discarded except for The World Calendar. . . .

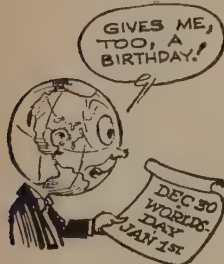
Time moved forward, but not calendar plans, until 1952 when India's Prime Minister Nehru took the lead in pushing the move through the United Nations. Since then other nations . . . have joined in support.

Whether there will be any calendar reform at all rests with the Council.

Enough governments express favorable views for the new calendar, the Council could turn its recommendations to the

General Assembly, which could set up an international convention to seek approval from all governments of the world.

If a World Calendar is adopted, one homework assignment may be lost for the kiddie who no longer will have to learn "30 days hath September, April"—can you finish it?



ufacturing associations, not only have endorsed the move as in keeping with modern

A UNITED NATIONS' STUDY*

By Elisabeth Achelis

LAST July at Geneva I addressed your Council on behalf of The World Calendar Association, International. Now the same privilege has been accorded me, for which I am again deeply appreciative.

A resolution at the 18th Session of the Economic and Social Council requested the Secretary-General "to obtain the views of governments of States Members and non members of the United Nations, on the desirability of calendar reform."

The fact that this resolution was adopted unanimously was of itself notable—a credit to the Council, to the proposer and seconder, and to all who participated in the discussion.

This step marked a significant advance from previous calendar changes—all earlier calendar reforms were brought about by other than international action.

A scientific and civil calendar for world-wide use under present conditions can be made effective only through such an international governmental organization as the United Nations. It is indeed fortunate for the world that such a body has been established to deliberate on subjects of this nature.

Mr. Dharma Vira, who last year presented the Indian proposal to the Economic and Social Council, summarized his Government's views as follows: (1) "the Council should recommend that a study be made of world calendar reform"; (2) a committee enjoying expert advice could then be set up "to examine the matter further"; and (3) "the Council would not be required to take a decision on what form . . . calendar reform should take before having considered the report of the expert body."

According to information released, many nations have not as yet replied, and the replies received are diverse. This was to be expected with a subject so wide in scope, affecting the lives, habits and practices of peoples throughout the world. Individual nations and groups are naturally concerned with their own points of view and conditions.

However, an international subject, such as the revision of the calendar, requires *international study* wherein world interests transcend national and group interests and all are merged for the greater good of all. Thus Mr. Vira's proposal that there be a special committee of experts set up within the United Nations *to study and provide the necessary information* and procedure is the just and effective—in fact, the reasonable—way to bring about the best results.

* A Statement prepared for presentation at the Hearing before the Committee on Non-Governmental Organizations of the United Nations Economic and Social Council, Resumed Nineteenth Session, 16 May—3 June 1955. With the ECOSOC action deferring consideration of world calendar reform to next year, the Hearing, by general consent of the interested groups, was cancelled. Miss Achelis' Statement is published as a matter of general interest.

This, it would seem, indicates a course of action which would be acceptable to a majority of the members of the Council, which, having advanced the matter to this stage, will surely wish to continue the work on this important subject.

A beneficial and far-reaching change in modern time reckoning came in 1884 when the railways in Canada and the United States adopted Standard Time. This was followed a year later by the International Date Line agreement at the International Meridian Conference in Washington, at which 25 nations were represented.

When the United Nations selected its present insignia, the *New York Herald Tribune* pointed out that the land areas depicted in the United Nations emblem were aligned on the zero meridian and the International Date Line, stating "the new orientation recognizes one of the first, most fundamental instances of genuine international action compelled by the growing inter-relationship of peoples . . . the universal acceptance of the Greenwich Meridian . . . a convention in which national pride voluntarily yielded to the practical necessity of developing a common tool to meet the requirements of the new age of traffic and discovery."

The same spirit should prevail in calendar reform.

Standard Time ran the gamut of religious opposition. The measure was alleged to be "meddling with God's time." So, too, today calendar reform is opposed by a few religious groups who view the Indian proposal as "tinkering with the calendar." However, the opinion is widely held that when a practical civil calendar has sufficient support to be adopted opposition will vanish as before.

An improved calendar should be viewed in broad perspective. It should preserve the best of the past, offer the best for the present, and hold for the future a sense of better international cooperation.

Old methods no longer suffice. Old practices do not meet conditions of today. New thoughts, new ideas and new concepts, encouraged by an international body, are essential to progress.

In order that a *perpetual* calendar be in agreement with the natural year, the two new world holidays are as necessary as is the International Date Line. These days will be emissaries for cooperation, friendliness and understanding. They will be the first holidays jointly observed by all peoples, creeds, colors and races of the world. They may well prove a boon and a blessing in their dedication to peace and good will.

The request by India, in view of her own calendar complexities, is particularly pertinent for economic and social reasons. India is at present using 30 calendars including the Gregorian. And it should be remembered the Gregorian calendar is not a single calendar but a series, and an irregular series, of 14 different calendars.

For many centuries the present calendar was suited to the slow-going conditions then existing. But now in this split-second atomic age a better time-reckoning system is required than when the horse-drawn buggy was the fastest moving vehicle.

The resolution on World Calendar Reform last July having been adopted unanimously is evidence that the matter is properly within the jurisdiction of the Economic and Social Council. It is thus hoped that calendar reform will remain

within this body and that governments and peoples will be kept informed on the subject, its development and progress. Out of this will inevitably emerge the new calendar—"the very best with all conditions considered."

Noting that 1955 marks the tenth birthday of the United Nations, The World Calendar Association, International, has the honor of offering felicitations and congratulations on the many good works achieved. It is modestly suggested that the Council has an unique opportunity to give impetus to an international study of calendar reform and to bring it to a happy conclusion. Such action would be in line with the objectives for which the United Nations was organized—"to achieve international cooperation in solving international problems of an economic, social, cultural or humanitarian character"—and among these belongs the stabilized civil calendar, one and the same for all the world.

THE WORLD CALENDAR AND THE STATE DEPARTMENT

(The following editorial appeared in many newspapers across the country.)

THE State Department recently jolted supporters of the proposed World Calendar. In reply to a question from the Secretary-General of the United Nations for an opinion on the desirability of calendar reform, the State Department gave a most discouraging reply.

The State Department admits that its position was determined because of the opposition of minority groups, mainly basing their opposition to The World Calendar on religious precepts. While we have sympathy for all minority groups and their religious precepts, we fail to understand how modernization of the calendar could detrimentally affect these groups.

The proposed World Calendar would have many advantages. Each quarter would have a first month of 31 days and two remaining months of 30 days each. The quarters would always begin on Sundays and end on Saturdays, and each quarter would be equal in length. The quarters are not equal in the present calendar, nor do they begin on the same day, nor do they have thirteen weeks and ninety-one days each, as we would each quarter in the new calendar.

The new calendar would feature twenty-six weekdays in every month and days and dates would always agree from year to year and holidays would always come on the same day of the week. Moreover, holidays would be arranged to fall on Saturdays or Mondays, so that long week-ends could be worked out for working people.

We are entirely in favor of The World Calendar, believe it represents progress and would be a step forward. Moreover, we believe the State Department was ill-advised in opposing its adoption.

IS THE WORLD READY FOR A NEW CALENDAR

By John A. Menaugh
Chicago Tribune Magazine

ALMOST everyone sometime or another has calendar trouble. Much of the trouble arises from the fact that the world still is plugging along on a calendar that was invented 372 years ago. It, the Gregorian, or so-called New Style calendar, was a decided improvement on the Julian calendar, which it supplanted. But its numerous shortcomings long have been the source of annoyance.

From time to time advocates of calendar reform have come forward with suggestions on how to improve our present calendar. The proposal to divide the year into 13 months to simplify the reckoning of time has met with strong objection, although a number of business firms have used the system to advantage. The 13-month year so long has been acceptable that it is doubtful it ever will be abandoned. Even the old Roman calendar, after 713 B.C., contained 12 months, as also is the case (with certain exceptions) of the Jewish calendar, which dates back into antiquity more than 5,700 years. The Mohammedan calendar follows the 12-month plan, and the short-lived calendar of the French Revolution adhered strictly to the 12-month idea.

A great many people today are urging the adoption by international agreement of what is called The World Calendar, a scientifically devised time plan which eliminates a number of the objectionable features of the present calendar. . . .

With the present calendar of 52 weeks of seven days each, it is necessary, as has been mentioned, to borrow a day from another week to fill out the full 365 days of the year. The 365th day in The World Calendar is added to the end of the year, not given a regular weekday name, is termed *Worldsday*, and is offered for acceptance as a universal holiday. The extra day in leap year is inserted into the middle of the year, between 30 June and 1 July. It is called *Leapyear Day*, and it is proposed that it, too, will be a world holiday.

Years of scientific study have gone into the making of The World Calendar. . . . It is based upon the ideas of not one but of many persons who have presented plans from time to time.

The list of important organizations which have approved the adoption of The World Calendar is an impressive one. The World Calendar plan was offered for action by the government of India, and seconded by Yugoslavia, at the meeting of the United Nations Economic and Social Council in Geneva in 1954. Previously the governments of Afghanistan, Brazil, Chile, China, Czechoslovakia, Estonia, Greece, Hungary, Mexico, Norway, Panama, Peru, Saudi Arabia, Spain, Syria, Turkey, and Uruguay had approved The World Calendar. . . .

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OF TIME and the CALENDAR

"Brief, absorbing book, written by an intelligent and determined woman. . . . If the plan she advocates goes into effect, Elisabeth Achelis may rank with Julius Caesar, the Emperor Constantine and Pope Gregory XIII as one of those who changed man's reckoning of time." *Baltimore Sun*.

"A fascinating account of the calendar's ups and downs since it was developed in ancient Egypt." *St. Louis Globe-Democrat*.

"Logical, practical, and workable." *The Argonaut* (San Francisco).

"The president of The World Calendar Association has devoted twenty-five years of energy . . . to the development and exposition of the best international use of time." *New York Times*.

"Miss Achelis has succeeded in arousing a loud demand for a change to a perpetual calendar." *Kansas City Star*.

OF TIME and the CALENDAR

HERE in succinct form is everything you need to know about the history of the calendar—from the ancient moon calendar to the Gregorian Calendar adopted in the sixteenth century to The World Calendar now under consideration by the United Nations and the various governments of the world.

It's time for a change, Miss Achelis argues, and the improved calendar she has crusaded for since the early 1930s has now secured strong backing around the world and may be adopted by 1961.

OF TIME AND THE
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It would be a splendid thing if our 350,000,000 people could have a single national unified calendar. As most of the Indian calendars are arranged on a twelve-month basis, it would obviously be easier to meet on this common ground. I am in favor of such a calendar. I am in favor of a standardized calendar for the whole world. . . . I have been informed of, and I welcome, the international movement for calendar reform.—Mahatma Gandhi.

Different schemes of reform have been proposed. To my mind there is only one that is deserving of serious consideration, and that is the calendar advocated by The World Calendar Association.—Sir Harold Spencer Jones, Astronomer Royal.

Regarding the proposed World Calendar . . . I have previously been interested in this subject and have indicated my support for a World Calendar.—U. S. Senator James E. Murray.

The proposed World Calendar would be a unifying influence of the very first order. It would facilitate cooperation and understanding between the nations. . . . As a Christian minister I welcome the Plan and commend it from a conviction that its adoption would be a positive step forward, and a long one, in the direction of world harmony and peace.—Dr. Robert J. McCracken, The Riverside Church, New York.

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About the Author

(Excerpts from a Profile by Geoffrey T. Hellman in *The New Yorker*)

"Miss Achelis has, since 1930, spent practically all her time trying to secure the universal adoption of a permanent, unchanging calendar. Her vehicle is The World Calendar Association, of which she is founder and president, and whose membership includes H. G. Wells, August Hecksher, Bishop Manning, William Green, Professor John Dewey . . . Miss Achelis's interest in the calendar came practically overnight and has never flagged. . . .

"In the summer of 1929, when she was staying at the Lake Placid Club, feeling more or less at loose ends, she heard the club's proprietor, the late Dr. Melvil Dewey, give a talk on how to simplify life. [This started her on her work of simplifying the calendar.]

"Miss Achelis is a handsome blue-eyed woman who dresses fashionably and has a rather shy air. She speaks forcefully in well-modulated tones. She habitually wears earrings, a custom which originated as a measure of identification. She and her twin sister used to look so much alike that when they entered women's doubles tennis tournaments, their opponents were never quite sure which one was serving. To clear up the confusion, their brother gave Elisabeth a pair of earrings to be worn as a distinguishing mark."

"The author writes with persuasive conviction," says *The Booklist*, American Library Association bulletin in recommending *OF TIME AND THE CALENDAR*.

"Many cogent arguments for the world-wide adoption of *The World Calendar* by 1961. . . . Readable useful book for any library." *Library Journal*.

"Miss Achelis' analysis of the calendar reform is clearly and interestingly presented and her arguments in favor of the new system are . . . highly convincing." *Morning News* (Savannah, Georgia).

"Elisabeth Achelis describes the evolution of the calendar and the development of *The World Calendar* in an engrossing volume." *Herald-Express* (Los Angeles).

THE YEAR IN ANCIENT EGYPT

By Dr. Richard A. Parker

Dr. Parker is Wilbour Professor of Egyptology, Brown University; trustee, American Research Center in Egypt; author of The Calendars of Ancient Egypt (1950).

WHEN Julius Caesar, with the help and advice of the astronomer, Sosigenes of Alexandria, reformed the Roman calendar in 45 B.C., at the basis of his reform was the knowledge acquired during his stay in Egypt that the Egyptians had determined the length of the year to be exactly $365\frac{1}{4}$ days. The history of the calendars in Egypt and how the Egyptians came to this figure for the length of the year is the subject of this article.

The earliest calendar of which we have any record in Egypt was one based on the moon and the star Sirius, the brightest star in the sky, called by the Egyptians Sothis. In the ages before this historical calendar, which we shall describe shortly, we suppose with great probability that primitive man in Egypt, as elsewhere, had counted time in days and lunar months and had become aware of the rhythm of the seasons with the inundation of the river valley through the rise of the Nile followed by its subsidence, then the time of planting and growth followed by harvest and low water until once again the Nile began to rise and overflow its banks. Gradually primitive man would come to associate some four lunar months with the period of inundation, four more with the season of growth, and four more

with harvest and low water. He would also have come to notice that the heliacal rising of Sirius (that is, its reappearance in the eastern horizon just before sunrise after it had been invisible for some seventy days because of its proximity to the sun) took place just about the time the Nile began to rise so that he would regard the reappearance of the star as the herald of the inundation.

No later than the first dynasty of Egypt (ca. 3100 B.C.) and possibly earlier, all these observations had resulted in the formulation of a well organized and regulated luni-stellar calendar which was kept in place in the seasons by the addition to the year of a thirteenth month when necessary, since twelve lunar months total on the average only 354 days. The first lunar month after the heliacal rising of Sirius began the Egyptian year and the year was kept in place by regulating it in such a way that the day and festival of this rising always fell in the last month. Whenever the festival occurred in the last eleven days of the twelfth month, the following year had thirteen months, the first of which was an intercalary one. In this way the year maintained a good relation to the seasons, and these were considered as three of four months each.

Such a calendar, though entirely de-

pendent on observation of the moon and the star, would be a perfectly adequate instrument to measure time for primitive man. When, however, Egypt had become a united land for some time and a strong centralized government had grown up, it must have been decided that for fiscal and administrative purposes a year which had now twelve, now thirteen months, all of which began by observation, was awkward and unwieldy. The problem was solved by the creation of an abstract or schematic lunar year of 365 days. This might have been done in either of two ways. Since the present calendar was controlled by Sirius one could have counted the number of days between two or three successive heliacal risings of the star, and these are normally 365 days apart, or one could have averaged the days of consecutive lunar years. This operation, after as few as eleven lunar years, would have suggested 365 as the average whole number of days to the natural year. After the analogy of the old lunar year the new one was divided into three seasons of four months each, each month having thirty days for simplicity's sake, with the remaining five days regarded as an abbreviated intercalary month and placed at the beginning after the analogy of the intercalary month in the old lunar calendar.

This new calendar year, which we may call the civil calendar,* is the one familiar to all students of ancient Egypt, except that at some later time the five extra days came to be felt as ending, rather than beginning it. But it is important to realize that at its introduction (most

likely in the twenty-ninth century B.C.) it was regarded as an artificial lunar year, planned to run as concurrently as possible with the old lunar year. Thus, since the lunar year oscillated due to its varying lengths, the fact that the new civil year was a fraction of a day shorter than the true solar year would remain unnoticed for decades. Eventually, of course, it would become obvious that the civil year had moved forward in relation to the lunar year, but by this time the civil year would have been in regular use for more than a century so that altering it by the insertion of a sufficient number of days to bring it back again into general agreement with the lunar year was rejected. What happened instead was the creation of a secondary lunar year which was attached to the civil year and revolved with it through the seasons. These three forms of the year, two lunar and religious and one civil, remained in use right to the end of Egyptian history.

Now it did not fail to strike the Egyptians that the annual and regularly recurring phenomenon of the heliacal rising of Sirius bore a rather fixed relation to the civil year. Given the same conditions of good visibility and the same point of observation, the rising would take place for four years on the same date in the civil year, for the next four years on the day after the first date, for the next four years on the day after that and so on. To this phenomenon has been given the name "Sothic cycle," and this means that at four-year intervals the star will rise on successive days of the civil year so that after 1,460 years the civil year will have made a complete cycle through the seasons and will be back again at its starting point.

* *Editor's Note:* This new civil calendar is the one referred to by many historians and scholars as the "solar calendar."

In this way the Egyptians arrived at the length of the year as being $365\frac{1}{4}$ days, but we must remember that they were not measuring a solar year but a stellar one, that of Sirius. As it happens the Julian year and the Sirius year are almost exactly the same in length but this was purely coincidental. They are both slightly longer than the true solar year, so that the adoption by Julius Caesar of $365\frac{1}{4}$ days as the correct length of the year required later the Gregorian reform to produce our present calendar, one which over the centuries averages out to the true solar year.

The Egyptians themselves never took advantage of this knowledge to stabilize

their own year. The third Ptolemy, Euergetes, in the decree of Canopus, 238 B.C., attempted the introduction of a sixth intercalary day every four years to keep the civil year in its then relation to the seasons, but in this he was completely unsuccessful and the civil year continued its forward shift without interruption, until Augustus, the successor to Julius Caesar, did insist upon a leap year in the Egyptian calendar and in 30 B.C. that reform created the Alexandrian year. The wandering year did not disappear, however, and documents in the Roman period in Egypt are as apt to be dated in the one year as in the other, a problem which vexes the historian.

*The Seasons**

By J. Wood

Sweet spring time is the morn:

Flowers blooming,

Eggs hatch,

Brooks running,

Cricket match;

A new world then is born.

Scorched summer is the noon:

Plants wilting,

Sleepy kine,

Swamps steaming,

Swimming time—

A hot world in a swoon.

Fiery fall is eve:

Leaves dropping,

Bears laze,

Rain falling,

Football days;

A tired world now we leave.

Wild winter is the night:

Trees resting,

Wolf pack,

Blizzards blowing,

Hockey's back—

A dead world with no light.

* Republished from *Acta Ridleiana* (Christmas, 1953), the school magazine of Ridley College, St. Catharines, Ontario.



Painted Pottery Bowl from Southwest Iran (Susa, First Style), about 3500 B.C. By the fourth millennium B.C., the Milky Way was seen as a great sky-pool double because it was a two-dimensional world, with channels at the east and west points where the water flowed down to the earth as rain. The birds symbolize the divine Power that descended in bird form from a realm of cosmic light above the heavens. The comb is the abstract rendering of the bird. The drawings are from J. de Morgan, Mémoires de la Délégation en Perse, Vol. XIII, Pl. XVIII. 1, 4.

THE FIRST NEOLITHIC CALENDAR

By Dr. Phyllis Ackerman

Dr. Ackerman is an authority on early Asian iconography, author of books and articles on textile history, and former professor of Early Asian Culture at the Asia Institute.

THERE was no clock, no calendar, no compass. There were no minutes or hours, no weeks, no months, no seasons, no year, no north, east, south or west. Time had entered Man's experience only as dark, light, dark; hot, cold, rain again—and the "again" was but a vague notion of recurrence. Space was even more amorphous, scarcely even *here* and *there*, since men had only briefly-fixed points of reference. All this was fifteen, twenty, thirty thousand years ago and Man was a wandering, homeless hunter and food-gatherer.

Some control of space was doubtless fumblingly developed before time even began to be an ordered continuum. Natural shelters were precious and worth returning to, especially whenever ice or pluvial periods began submerging life, and ceremonial caves became increasingly important, with magic paintings on the walls and, even twenty thousand years ago, clay sculptures, hidden chambers and some sort of rites. But to repeat in reverse a long rambling excursion—such as hunters trailing game had to make—required, in addition to landmarks, direction. To help create direction a natural compass daily moved its dazzling indicator across the sky: the sun rising and setting marked an approx-

imate east and west. This two-dimensional space pattern tracing a simple path through multiple confusion has lasted in some retarded societies down into our own time.

Night space was less easily mastered: the moon changed, seemed to go awry. But there was a wide white band in the night sky and the sun sometimes seemed to rise out of one end of this. Swinging in a long curve, clear against the starred blackness, this stream of pallidly shimmering light likewise fitted, though not quite so reassuringly, into the two-dimensional design. Patterns on a series of small, intricately carved, non-utilitarian staghorn rods found in various European prehistoric sites, in relation with certain prehistoric myths lingering especially in Egypt, permit us to believe that the Milky Way and the rising of the sun in relation thereto had been observed at least by the Magdalenian period—about 12,000-8,000 B.C.

Time remained only roughly differentiated because Man was indifferent to it. When there was game to kill and eat, it was gobbled and gorged until the last split bone had been licked dry of marrow; when there was nary a beast, hunger rattled. Berries and nuts were picked, roots dug if they were to be found; but

maybe they were not. Whether food was abundant or starvation crept in, there was nothing to do about it, except perhaps to try a bit of magic, or to move on before knees got too weak in the hope of running into better luck elsewhere.

Alleviation might come by a change in space, but time was, as far as anyone then imagined, irrelevant. Knowing *when* you had last eaten did not help you to eat again. So the past was unmeasured, unsorted, a lump of mingled memory images, even without controlled succession.

Then, both suddenly and gradually, doubtless by stumbling and irregular accidents and trials, Man developed a way to provide food: coherent intention began to replace brute chance. He recognized the potentiality of the seeds, which hitherto had been only another kind of food. He gardenized.

But chance was not to be easily banished. The rule seemed clear: seeds put into earth make plants that give more seeds, and leaves and roots, to eat. Once, twice perhaps it worked. Then plants came, but they withered and died. Water was the answer to that one, probably not too difficult to deduce. But more baffling troubles came, far more recalcitrant: no bits of green pushed through the dirt where the seeds had been so thriftily laid, and covered, and anxiously watered.

How did these first gardeners with no precedents, so little comparative experience and no techniques for organizing observations arrive at the realization that what they needed in order to improve their chances of getting crops was a system of time? How could they, in a

timeless world, imagine that they must work out measurements for time, schemes of dating, however broad and approximate, models for recognizing points of recurrence? Eventually they would probably fix weeks and months, with the help of that changing moon which had seemed to go awry; but more immediately essential was the idea of seasons. Here was the start for the rudimentary calendar.

The very nature of the year's structure must have appeared only by haphazard bits and pieces. First these prehistoric men had to grasp the notion that there was a span which we call "Spring"—the planting moment. When they set seeds prematurely in a "January thaw," their meager seed supply would be tragically wasted by the return of the freeze; or when seeds, held by over-prudence after such a mistake, sprouted too late, the tiny plantlets would shrivel in summer heat. The gardener had to catch the brief, specific series of days that was not too early and not too late.

Already their forebears as hunters had cultivated the habit of looking to the sky for space guidance. To gardeners the sky had become even more important as source of weather—reviving showers or drowning storms, stimulating sunlight or scorching drought. Day and night also happened in the sky. To look to the sky again for identification of the planting time would have been natural almost inevitable.

The sun traversing its simple path was no help. The moon expanding and shrinking and endlessly repeating the process was too difficult. The Milky Way was sometimes a good space guide, a sky path that helped in retracing a path

here below, but for organizing time it plotted no readily recognizable cycle. How many thousands of hours must baffled eyes have stared at the Milky Way and the deep dark alongside, splashed unevenly with flickering bright points, before there emerged from that irregular multiplicity, at one end of the wide white band, three evenly spaced stars, with another bright one on the medial line far above and a fifth (they could count to five from their own fingers) at an equal distance straight below the band of three—the constellation Orion, we call it.

How many more thousands of observation-hours for early gardeners to learn when that group of five stars came and went. How did those pioneers of observational astronomy have the shrewdness to single out at the opposite end of the long white band, as balance to those five stars, that bright red star which we call "Antares"?

But eventually, probably about 6000 B.C. and almost certainly somewhere in the Near East, three tenets of folk wisdom were established: when the five stars were in the evening sky all crops had better be stowed safely away—storms and cold were due; when the red star began crossing the evening sky it was safe to put out the seeds—better not wait too long; or again, when the belt of three luminous ones rose with the sun, hot days were due, and the growing plants would probably profit by skins full of water gently poured.

The first calendar had been found. No one wrote it down—there was no writing; it glittered in the evening sky, or shone in the last darkness just before the sun struggled up in glory. It

was a very simple scheme of time that was plotted by these half dozen stars, five at one side, one at the other of the night vault; but it marked a momentous advance for the crudely organized world of some eight thousand years ago. Their alternation roughly divided two seasons.

This two-dimensional year was, sooner or later, coordinated with the far more ancient two-dimensional space. Antares, the Spring star, represented the East; Orion, the Autumn figure, was the emblem of the West; birth moved into youth, age presaged the grim winter death.

Grim, indeed, was the winter, especially in the mountain meadows where this primeval rain-agriculture originally flourished; but the huts, sunk half their height into the ground, with a center fire-pit, could be kept dry and warm. Huddled in close quarters round the blazing chunks, with two or three earthenware pots buried in hot ashes at one side, giving off savoury steam, women pushed, patted and stroked wet clay into food vessels, or spun fleeces, or slipped a bobbin across a narrow web, while men polished stone blades or pointed new bone awls; and one of them told a tale—the Calendar had come alive.

There was a hero, huge and strong, who strode across the sky. He wore a magic belt that gave him greater strength (young men fingered their belts and envied the hero of stars). An enemy appeared, his body smeared with potent red earth (that was natural—they painted their own bodies red when they needed strength for a fight or luck for the hunt, and they sprinkled this red earth liberally on the bodies of their dead). The two sky strong-ones fought.



Silver plate with inset repoussé figures, illustrating the Marriage of Dionysos (East Parthian Empire, Second Century A.D.). Herakles (Orion), standing on one foot (as Orion figures often do, perhaps to assimilate them to the post imagined to mark the West), follows the marriage chariot of Dionysos, who represented the star Sirius. Above him curves his plant emblem, the vine, in fruit to indicate Autumn. Hyades (the "Waterer"), standing on the dashboard pours out rain (Sirius was the Rain-star). Ariadne, the Bride (probably the star Procyon) nestles beside the colossal bridegroom. Eros and Psyche, symbolizing marriage, precede the chariot. Pothos (physical love) dangles the lash of a whip, but the craftsman has misinterpreted the design—it should be Aphrodite's belt, a potent love charm. Himeros (Marriage) kneels below Ariadne. In the exergue a lion puts its head into a winejar, a reference to autumn Dionysiac festivities, but also depicting the juxtaposed constellations Leo and Krater. The flanking pomegranates in fruit emphasize virility. The photograph is taken from O. M. Dalton, *The Treasures of the Oxus* (London, 1926), Plate XXVII (No. 196).

The teller made the most of the fight and eager male listeners added savage details. Orion was slain and went down amongst the shades. The Red One, triumphant, was now chief. Soon would be planting time.

The first calendar and early myths were inextricably inter-related. As the craft of gardening spread round the world, the identification of the seasonal stars went with it, and varying stories were invented in different lands to explain the seasonal disappearance and re-appearance of these oppositional heroes. Their names are legion, their histories ingeniously embroidered, but the basic themes are as simple as the facts: first one, then the other must prevail, the de-

feated must travel afar and come back, or die and be resurrected.

Orion especially became a striking personality, however he was called: Gilgamesh, Ninurta, Marduk, Osiris, Vere-thraghna, Indra, Herakles, Orion himself. These designate some of the most famous of his personations. Their appurtenances and adventures were elaborated, their relations expanded and they moved into literature, often leaving the constellational origins behind them. But their basic reason for existence was simple and clear: Orion and Antares were the two hands on the cosmic annual-time clock, marking the nodal points in the rotation of the gardener's year.

When The World Calendar Comes

By James Peter Warbasse

Thirty days has brown September,
March and May and cool November,
August, June, and February.
June finds Leap Year necessary
With a day to make us merry.
Other months to help the fun
Give us gladly thirty-one.
Seven months with thirty days;
Five with thirty-one always.

Today's Date Easy: All 5s

(New York Herald Tribune, 5 May 1955)

Chicago, 4 May (UP).—Tomorrow you can do something that can be done only once in eleven years. You can write the date with a single numeral like this, 5/5/55.

Mathematician Lewis Galbraith said the next chance will come eleven years hence, 6/6/66. Or you can wait 267 years for the jackpot, 2/2/2222.

UNITED STATES BLOCKS WORLD PROGRESS ON CALENDAR REFORM

The opposition of the United States Department of State to any change in the present calendar, and its recommendation to the United Nations "that no further study of this subject should be undertaken," has evoked letters of protest from individuals and organizations in all parts of the United States. Typical letters, addressed for the most part to Secretary of State John Foster Dulles or Secretary-General Dag Hammarskjöld of the United Nations, are published below, in part or in their entirety, as a matter of widespread public interest.

Dear Mr. Secretary:

Members of our association are surprised and shocked by the position which it is reported to us you have taken with reference to the attitude of our government on the general subject of calendar reform.

We cannot understand why you would close the door so completely. It seems to us that it would have been much preferable to have favored a thorough study of the subject.

Our association has strongly endorsed the work of The World Calendar Association, and we believe the time is long past due when our present antiquated calendar system should be modernized.

We sincerely urge you to reconsider the decision in opposition to world progress.

MYRON R. BONE

Vice President, American
Industrial Bankers Assn.

Fort Wayne, Indiana, May 6, 1955

To The World Calendar Association, Inc.:

... I have written and mailed to each, the Secretary of State and the Secretary-General of United Nations, my surprise and regret at the unwillingness of the Secretary of State to make so salutary an advance, or even to consider such a proposition.

J. C. RUPPENTHAL

Secretary, The Bar Association of Northwestern Kansas

Russell, Kansas, May 12, 1955

Mr. Secretary:

I am writing about a subject which I am sure you will be referring to some other person because of the terrific pressures on you. I wanted to register my dismay over the news, if it be correct, that the United States government will not even make a study of calendar reform. . . .

I have very substantial reasons for believing that a great and representative cross section of the Christian world is deeply interested in some kind of calendar change that would bring a similarity of calendar into the practice of divisions of the churches now operating on different calendars. They are also keen about the stabilization of Easter which involves calendar reform. Hence it seems to me a curious thing if our own government takes a completely negative attitude toward a study of the problem, particularly since not only the great majority of the Protestant churches, but likewise the Roman church has shown a favorable attitude toward the whole thing.

HENRY SMITH LEIPER, D.D.

Secretary, Friends of the
World Council of Churches

New York, March 24, 1955

Dear Mr. Secretary:

I was amazed to read of the position taken by the United States in connection with the new calendar reform proposed to the United Nations by the government of India. I was particularly amazed to find that you not

only did not agree that we should have a new calendar but that you oppose all study of calendar revision. There are many organizations and individuals in the United States who have long been of the opinion that a more equalized calendar was long overdue.

I feel that the United States, being as progressive a nation as it has been in the past, should at least approve of further study on the matter despite the minority groups who are protesting for religious purposes.

I trust that public opinion will be such that you will have a sound basis on which to reverse your position.

H. KENNETH HARDIE
Comptroller, Universal
Moulded Products
Corporation

Bristol, Virginia, May 4, 1955

To the Editor of *The Knickerbocker News*,
Albany, New York:

The door to reform or progress should never be closed, whether it be for improvements in mouse traps or calendars. Yet our State Department recently sent a note to the U.N. to oppose any change in the present calendar saying: "This government, furthermore, recommends that no further study of this subject should be undertaken." Should our government spokesmen be so finalistic?

Actually more study is not needed. It has been studied for centuries. Industry and other groups have studied calendar reform enough to learn that we would benefit from a perpetual calendar enough to justify a change. It is education that is needed.

Some groups have studied it little enough to learn that some feature displeases them personally. It seems that most of the opposition stems from the insertion of the 365th day (Year-end Day, World's Day or 31 December), between the last Saturday of the old year and the first Sunday of the new year. Leapyear Day is handled similarly at the end of June. This odd day feature is necessary to afford us a perpetual 12-month calendar of four equal quarters of 91 days each. Some religious groups object to this odd day because it causes about 2.4 per cent of the Saturdays to fall on the eighth day,

whereas they think it is important that absolutely every Saturday fall on the seventh day. This odd day does not prevent anybody's worship. Some people are worshipping every day without requiring a special day for it.

People who think the seven-day continuity for worship is important enough to keep the rest of us from having more orderly and efficient social and economic life are emphasizing the rituals of their religion rather than the more important ethics of good living. Religion should be a personal force as a good means to a good end. It should not be an obstacle to progress. Calendar reform is not an obstacle to religion. In fact, it would add a few holidays for worshipping. The long week-ends could be used for pilgrimages, retreats, etc. Some religious groups have expressed approval or no disapproval of reform.

The group opposing calendar reform on a religious basis reminds one of those who opposed the adoption of standard time zones. They claimed that civil authorities had meddled with "God's time." There were demonstrations and riots. The present calendar is a man-made unit of measure barely in keeping with conditions of yesteryear. It has been changed before. When Pope Gregory adjusted it about 1582, 10 days were dropped in October. People rioted, demanding their 10 days back. There are always people who resist change, but progress triumphs, though belatedly.

Proponents of calendar reform want to see our time measurement in keeping with our scientific age. Our instruments for measuring distance, volume, weight, etc., are not varied and discarded each year as is the calendar. We would not want confusion in distance, volume or weight. Why tolerate it in time just because we are accustomed to it in a centuries-old calendar? Calendar reform would raise efficiency in commerce and bring more dividends or profit. Stabilized holidays would benefit individuals. World Calendar proponents seek no personal gain. Let us move forward.

JOHN A. ENGLISH
Troy, New York, March 29, 1955

Sir:

It has been quoted in the press—and all such reports may be suspect as to accuracy—that the State Department has come out against Calendar Reform, as presented to the United Nations by India; and that the State Department is opposed to all study of calendar revision.

I can hardly believe that the United States of America, which has pioneered in new and better things and methods for a more efficient life, would take such a reactionary attitude toward calendar reform.

If the report from the press is correct, I urge you by all means to give careful study to this problem and change your decision so it may be studied with an open mind.

There are so many advantages to gain by calendar reform that would lessen our dependence on the calendar itself; and thereby avoid inefficiency and mistakes in following the complicated, antiquated system of weeks, months and holidays.

The plan for The World Calendar has met opposition from (1) calendar manufacturers, (2) religious groups, who feel that their weekly holidays are sacred.

Surely the calendar manufacturers can use their printing presses for some other and better use when and if The World Calendar is adopted. The religious groups who are asking to retain their present day of the week for sentimental reasons, have been forced to change this in years past when the Gregorian calendar was established. Furthermore, different countries in different parts of the world are using different calendars today; while The World Calendar would make this uniform and give its small contribution toward universal peace through universal understanding.

WALTER J. BERKOWITZ

Treasurer, Tension

Envelope Corporation

Kansas City, Missouri, May 11, 1955

To Mr. John Foster Dulles and
Mr. Dag Hammarskjöld:

In this brief note, I speak as the Vice President of the Management Consultant Division of Scott, Incorporated, an organization which works with top management of corporations in solving problems of administration, many of which have the central problem of *time periods and the calendar*.

Enormous sums of money the world around may be saved by reasonable calendar reform! I say this as an executive who has worked with other executives on calendar and timing problems of business . . .

I urge (1) that the United States, through the State Department, reverse its present position, and promptly *approve* the STUDY of possible calendar reform (not the reform itself at this time); and (2) that the United Nations, as promptly as may be possible, launch a full-scale study of this character for the general welfare of the world and all mankind.

ROBERT R. AURNER

Carmel, California, May 6, 1955

Dear Sir:

The American Academy of Arts and Sciences is seriously disturbed by the report that the State Department, apparently without sufficient study or adequate reason, has replied to the inquiries of the Secretary-General of the United Nations as to the desirability of calendar reform, not only opposing any change but actually recommending that no further study of this subject be undertaken.

As I wrote you on November 12, 1954, our Academy has on five occasions during the past quarter century given consideration to this matter, and on November 10, 1954, our Council reaffirmed its previous support of the "World Calendar" plan (the twelve-month equal quarter plan), which has received the support also of many scientific, religious, and commercial organizations both in the United States and throughout the world. Since agreement has at last been found among the representatives of many nations, it seems to us that the time has come for the full influence of the United States to be thrown behind this plan, the arguments in favor of which are convincing to all who have seriously studied it, except for a minority of religious reactionaries.

We do not know what representative of the State Department is responsible for the unfortunate reply to the United Nations. But we urge you to reverse it promptly, and thus to extricate our government from an embarrassing position.

WILLIAM C. GREENE

Secretary, American Academy of Arts and Sciences

Boston, Massachusetts, May 12, 1955

Dear Secretary Dulles:

For several years we have been very much interested in the proposal advanced by The World Calendar Association, Inc., wherein a revised and improved calendar has been advocated. We feel that we speak for many business firms affiliated with our organization in stating that favorable consideration is warranted to this highly important proposal.

It therefore comes as a matter of great surprise to learn that consideration of the subject has been rather casually "brushed off" by those in our government to whom it has been presented recently.

By reason of the interest evidenced by other countries and groups, both political and religious, it would appear that the United States should lend its support to more favorable consideration than has been shown to date.

It is therefore hoped that reconsideration of the matter will be evinced in the near future. Some acknowledgment to the foregoing will be appreciated.

E. S. MILLER

Manager, Credit Bureau

Sioux Falls, South Dakota, May 9, 1955

Dear Mr. Secretary:

Speaking as an individual, I feel obliged to express my surprise, and even indignation, at the reply of the State Department to the request of the Secretary-General of the United Nations for an opinion on the desirability of Calendar Reform.

Your refusal to consider this important subject, and, above all, your recommendation that further study of Calendar Reform be stopped seems to me an arbitrary and ungracious dismissal of an appeal from the government of India, with which eighteen other national governments and many business and scientific groups throughout the world are in accord.

... I feel qualified to state that this action of the State Department is contrary to the opinion of millions of American citizens and an affront to the influential American organizations that for many years have favored Calendar Reform.

ALLAN P. AMES

District Manager, Florida

State Chamber of Commerce

Pensacola, Florida, May 6, 1955

Dear Mr. Secretary:

As a "wee small voice" from the business world of the great midwest, we vigorously protest the stand of our usually forward looking State Department in opposing the study of calendar reform by the United Nations.

Our government and the United Nations should not only study calendar reform, but should be instrumental in bringing about its adoption by the world in general.

The World Calendar as proposed by The World Calendar Association, Inc., if adopted and observed by all nations, would certainly bring about more stability and efficiency in the business and social life of the people in this scientific age.

We ask you to reconsider the stand taken, and at least favor the further study of calendar revision.

MABEL M. BOWMAN

Bowman Shoe Company

Monmouth, Illinois, May 5, 1955

Dear Mr. Hammarskjöld:

I was very sorry to learn that the United States had taken the position against calendar reform. I do not believe that this is the opinion of the country in general. In my opinion, calendar reform is most important to business and to the country . . .

Will you please set up a study committee and give this matter a careful appraisal, not only asking the Secretary of State of this country but also asking other countries for a careful appraisal?

CARL E. WHIPPLE

Superintendent of Schools

Warren, Pennsylvania, May 4, 1955

Dear Sir:

I wish to protest against the position which you have taken in a letter to the Secretary-General of the United Nations about the reform of the Calendar, as reported in the press of the United States in recent months. I think this is a subject well worth discussing by the United Nations. Its final decision may be adverse to the particular plan proposed by the government of India, but to say that any further study of the subject would serve no useful purpose is to me no less than shocking.

MAX O. LORENZ

Mountain View, California, May 7, 1955

My Dear Sir:

As one of tens of thousands of retailers in this great country of ours, not to mention the hundreds of thousands of other business people, plus millions of citizens with no particular axe to grind, other than World Harmony in a world calendar, I would like to protest the complete disregard of *Our Country* of even a study of the subject of a World Calendar which suggests a complete closing of our minds and closing the subject so far as our Country is concerned.

The closed mind seems to stem from a small religious group who have no assurance that days and dates are conclusive according to our present calendar or those calendars that have passed prior to our time.

From a business as well as a social angle The World Calendar has many advantages, and with close study I am sure that these advantages will be brought out if submitted to a committee with ample funds and open-minded personnel.

Please, let's not go backward because of a few definitely biased minded people.

DAVE M. BRITTON
Sales Promotion Director
Walker-Scott Company

San Diego, California, May 16, 1955

The Honorable, The Secretary of State:

The purpose of this note is to protest the position taken by the Department of State on behalf of the United States in opposing any consideration by the United Nations of the proposed World Calendar.

My protest is based on two considerations: the proposed calendar has merit; opposition even to study of the proposal is not in the American tradition of willingness to judge things on their merit.

WILLARD GALBRAITH

Washington, D. C., May 30, 1955

Dear Mr. Secretary:

It is a matter of deep regret and considerable shock to find that the State Department of the United States has taken the position that world-wide adoption of The World Calendar is undesirable and should not even be made a study by United Nations.

May I lodge a vigorous protest over such an incredible position? The vast majority of the people in the United States favor

this reform. It is not a religious but a secular matter and in no sense can it be regarded as an assault on religious liberty.

As an individual, and quite insignificant American citizen, this vigorous protest is offered because: 1. I think the United States should approve a study of the matter. 2. I think the United Nations should proceed with the study. 3. I think the new calendar should be adopted for the benefit of the many and actual harm to none.

LOUIS SPILMAN

President and Editor

Waynesboro News-Virginian

Waynesboro, Virginia, May 6, 1955

My dear Sir:

Having been interested in Calendar Reform for several years, and after studying the various proposals submitted for adoption of a new Calendar, I am convinced that The World Calendar has greatest merit.

It now has come to my attention that the State Department of the United States, at the request of the Secretary-General of the United Nations for an opinion on the desirability of Calendar Reform, has suggested closing the door to even a study of the subject.

I strongly protest this action of the State Department and urge that a Study Committee be set up by the United Nations to give an open-minded appraisal of this worldwide matter.

BERNARD BIDMEAD

Power Mercantile Company

Lewistown, Montana, May 13, 1955

Dear Mr. Secretary:

... As a professional scientist I am keenly interested that the proposed reform of the calendar shall go through in the near future, since it would simplify greatly the work of all people dealing with accurate measurements of mass, space and time. Any opposition to it on the grounds of sentiment or tradition seems to be wholly unwarranted in view of the great advantages the reform will bring.

I hope sincerely that you will support our point of view and that of all those who are for similar reasons, interested in this reform.

ERICH MOSETTIC

Washington, D. C., May 11, 1955

THE WORLD CALENDAR ASSOCIATION, INC.

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CHARLES S. McVEIGH, *Vice-President*

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THE WORLD CALENDAR ASSOCIATION, INT'L

AFFILIATES AND NATIONAL ORGANIZATIONS

ARGENTINA: The World Calendar Association, International, Affiliate, Rev. Fr. Juan V. Monticelli, S.S., Chairman, Calle Adolfo Berro 4050, Buenos Aires.

AUSTRALIA: The World Calendar Association, International, Affiliate, Prof. A. D. Ross, Chairman; John K. Lavett, Deputy Chairman, Box 4256 G.P.O., Sydney, N.S.W.

BELGIUM: The World Calendar Association, International, Affiliate, Dr. F. Moreau, Chairman, 115 av. George Bergmann, Brussels I.

BOLIVIA: Comité Boliviano del Calendario Mundial, Dr. Gaston Barrera, Chairman, La Paz University, La Paz.

BRAZIL: The World Calendar Association, International, Affiliate. (The Affiliate is at present without a Chairman due to death of Rear Admiral Radler de Aquino.)

CANADA: The World Calendar Association, International, Affiliate, A. J. Hills, Chairman, Room 31, 102 Bank St., Ottawa.

CHILE: Comité Chileno del Calendario Mundial, Prof. Alberto Cumming, Chairman, Calle Manuel Rodriguez, Santiago.

CHINA: The World Calendar Association, International, Affiliate, Dr. Ch'ing-Sung Yü, Honorary President; Dr. Chu Chia-hua, Chairman, 15 Chuan Chow St., Taipei, Taiwan.

COLOMBIA: Comité Colombiano del Calendario Mundial, Dr. Belisario Ruiz Wilches, Chairman, Observatorio Astronomico Nacional, Apartado No. 2584, Bogotá.

COSTA RICA: The World Calendar Association, International, Affiliate, Don José Borrás, Chairman, "La Prensa Libre," Aptdo. Postal 1533, San José.

- CUBA:** The World Calendar Association, International, Affiliate, Dr. Elias Entralgo, Chairman, Havana University, Havana; Dr. Salvador Massip, Adviser.
- DENMARK:** Representative, Torkil C. Johnsen, Gardes Allé 29, Hellerup, Copenhagen.
- DOMINICAN REPUBLIC:** The World Calendar Association International, Affiliate, Barney N. Morgan, Chairman, Box 727, Ciudad Trujillo.
- ECUADOR:** The World Calendar Association, International, Affiliate, Dr. Jorge Egred P., Chairman, Astronomical Observatory, Apartado 165, Quito.
- FRANCE:** The World Calendar Association, International, Affiliate, Sénateur Justin Godart, President; Jacques Tirouflet, Chairman, 1, Rue Bénouville, Paris 16.
- GERMANY:** Association for Calendar Reform, Dr. Carl Boehm, Chairman; Dr. F. Haercke, Vice Chairman, Postfach 278, Köln 1.
- GREAT BRITAIN:** The World Calendar Association, International, Affiliate, Lord Merthyr, Chairman, 20 Buckingham St., London W.C. 2.
- GREECE:** The World Calendar Association, International, Affiliate, Athanase Politis, Chairman; Prof. S. Plakidis, Sec., Observatory of University of Athens.
- GUATEMALA:** The World Calendar Association, International, Affiliate, Don Manuel Eduardo Rodriguez, Chairman, Diario "El Imparcial," Guatemala.
- HONDURAS:** The World Calendar Association, International, Affiliate, Don Julio Lozano, H. E. Don Rafael Heliodoro Valle, Honorary Presidents; Ingeniero Miguel Angel Ramos, Chairman, Biblioteca Nacional, Tegucigalpa.
- INDIA:** Committee on Calendar Reform, Prof. M. N. Saha, 92, Upper Circular Rd., Calcutta.
- ISRAEL:** Representative, Daniel Sher, 51 Gaza Road, Jerusalem.
- ITALY:** Italian Committee on Calendar Reform, Prof. Amedeo Giannini, Honorary Chairman; Dr. Carlo Rossi, Chairman, Piazza Armando Diaz 2, Milan.
- JAPAN:** The World Calendar Association, International, Affiliate, Dr. Joe Ueta, President; Dr. Susumu Imoto, Secretary, Osaka Municipal Planetarium, Yotsubashi, Nishiku, Osaka.
- MEXICO:** The World Calendar Association, International, Affiliate, Dr. Joaquín Gallo, Honorary President; Dr. Horacio Herrera, Chairman, Sociedad de Estudios Astronómicos y Geofísicos, Av. Observatorio No. 192, Tacubaya, D.F.
- NETHERLANDS:** Committee on Calendar Reform, Jacob Mees, Chairman, Blaak 10, Rotterdam.
- NEW ZEALAND:** The World Calendar Association, International, Affiliate, Dr. I. L. Thomsen, Chairman, Carter Observatory, Wellington, W. 1.
- NICARAGUA:** The World Calendar Association, International, Affiliate, Don José H. Montalvan, Chairman, Palacio Nacional, Managua.
- NORWAY:** The World Calendar Association, International, Affiliate, Major K. S. Klingenberg, Chairman, Thomas Heftyes Gate 56B, Oslo.
- PANAMA:** The World Calendar Association, International, Affiliate, Dr. Ricardo J. Alfaro, Honorary President, Panama.
- PARAGUAY:** Comité Paraguayo del Calendario Mundial, H. E. Señor Ministro Coronel Don Luis Irrazabal, Chairman, Paraguayan Embassy, Lima, Peru.
- PERU:** The World Calendar Association, International, Affiliate, Don Luis Montero y Tirado, Chairman, Av. Uruguay 305, Lima.
- PHILIPPINES:** The World Calendar Association, International, Affiliate, Ramon Carco, Chairman, 116 Padre Faura, Manila.
- POLAND:** Polish Committee for Calendar Reform. (The Committee is at present without a Chairman due to the death of M. Jakiel.)
- SALVADOR:** The World Calendar Association, International, Affiliate, Don Napoleón Viera Altamirano, Chairman, "El Diario de Hoy," San Salvador.
- SPAIN:** The World Calendar Association, International, Affiliate, Rev. Father Antonio Romañá, S.J., Chairman, Observatorio de Ebro, Tortosa.
- SWITZERLAND:** The World Calendar Association, International, Affiliate, Prof. Emil Marchand, Chmn., 2, Genferstrasse, Zurich.
- TURKEY:** The World Calendar Association, International, Affiliate, Dr. I. A. Dereoglu, Chairman, Beyoglu, Istiklal Caddesi 483, Istanbul.
- UNITED STATES:** The World Calendar Association, Inc., International, Affiliate, Elisabeth Achelis, President, 630 Fifth Avenue, New York 20.
- URUGUAY:** The World Calendar Association, International, Affiliate, Prof. Alberto Reyes Thévénat, Chairman, Liceo "Hector Miranda," Calle Sierra 2274, Montevideo.
- YUGOSLAVIA:** Committee on Calendar Reform, Professor Dusan Zebic, Chairman, Augusta Cesarca 1./I, Osijek.

READING MATERIAL

The following material may be obtained on request from The World Calendar Association, 630 Fifth Avenue, New York 20:

BOOKS

Time Counts, by Harold Watkins. London 1954.

Consider the Calendar, by Bhola Panth. New York 1944.

MONOGRAPHS AND PAMPHLETS

The World Calendar—Questions and Answers. A 16-page summary of the most significant questions concerning the value of The World Calendar.

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Calendar Reform Before the United Nations:

1. Basic Facts: Essential Dates, Excerpts, References.
2. 1947 Memorandum by Secretary General Trygve Lie.
3. Reply to the World Jewish Congress.
4. Jewish Support for The World Calendar, by Daniel Sher.
5. Economic and Social Advantages of The World Calendar, by James Avery Joyce.
(Also in French and Spanish.)
6. Abridged Report of ECOSOC Discussion (July 1954).

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THE WORLD CALENDAR FOR ONE WORLD

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Journal of
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An Open Mind

Business Enemy No. 1

Mars Clock and Calendar

More Calendar Resolutions

U. S. Junior Chamber of Commerce

National Retail Dry Goods Association

Calendrican Sketch

The Controller's Interest in The World Calendar

Monday Holidays—But

Benefits to Agriculture

That 'Backward Nation' List

The World Calendar Round-the-World

September 1955

THE WORLD CALENDAR

1ST

QUARTER

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

2ND

QUARTER

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

3RD

QUARTER

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

4TH

QUARTER

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

W (Worldsday, a World Holiday) equals 31 December (365th day) and follows 30 December every year.

W (Leapyear Day, another World Holiday) equals 31 June and follows 30 June in leap years.

In this Improved Calendar:

- Every year is the same.
- The quarters are equal: each quarter has exactly 91 days, 13 weeks or 3 months; the four quarters are identical in form.
- Each month has 26 weekdays, plus Sundays.
- Each year begins on Sunday, 1 January; each working year begins on Monday, 2 January.
- Each quarter begins on Sunday, ends on Saturday.
- The calendar is stabilized and made perpetual by ending the year with a 365th day following 30 December each year. This additional day is dated "W," which equals 31 December, and called Worldsday, a year-end world holiday. Leap-year Day is similarly added at the end of the second quarter. It is likewise dated "W," which equals 31 June, and called Leapyear Day, another world holiday in leap years.

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CALENDAR REFORM

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Clarence R. Decker, Editor

Linda Halsted, Associate Editor

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MORE CALENDAR RESOLUTIONS!

U. S. JUNIOR CHAMBER OF COMMERCE

The following resolution was adopted at the convention of U.S. Junior Chamber of Commerce in Atlanta, Georgia, on 23 June 1955. The complete list of endorsements of The World Calendar was published in the December 1954 issue of this Journal.

WHEREAS, the Gregorian Calendar now in general use is irregular and unbalanced, and

WHEREAS, a proposed new calendar known as the World Calendar which corrects most of the defects, which will be examined by the Economic and Social Council of the United Nations in 1955, and

WHEREAS, although the advantages of this proposed change have been recognized and the change endorsed by increasing numbers of people throughout the world, the position of the United States Government has been one of waiting for public interest to take the lead, and

WHEREAS, the arousing of public interest requires the distribution of information on the nature of the proposed World Calendar and the advantages to be gained from its adoption, and

WHEREAS, it would be desirable on the part of business organizations to have a uniform calendar for its use in the forecast of business activity,

BE IT THEREFORE RESOLVED that the United States Junior Chamber of Commerce in convention assembled in Atlanta, Georgia, June 23rd, 1955, hereby urges:

1. Adoption of the World Calendar;
2. That the United States delegation of the United Nations be instructed to vote for the proposal now before that body; and
3. That the United States Junior Chamber of Commerce make available to the public information for distribution to the public.

NATIONAL RETAIL DRY GOODS ASSOCIATION

The following resolution was adopted at the 44th Annual Convention of the National Retail Dry Goods Association on 13 January 1955, in New York City.

WHEREAS the adoption of The World Calendar would be generally beneficial, the National Retail Dry Goods Association endorses its adoption to the U.N., that adoption to take place in 1956.*

*Editor's Note: The proposed date for the adoption of The World Calendar has been moved to 1961.



Editorial

An Open Mind

"Well aware that Almighty God hath created the mind free . . . that truth is great and will prevail if left to herself, that she is the proper and sufficient antagonist to error, and has nothing to fear from the conflict, unless by human interposition disarmed of her natural weapons, free argument and debate, errors ceasing to be dangerous when it is permitted freely to contradict them . . ."

THESE noble words of Thomas Jefferson, one of America's greatest statesmen, are the soul of the practical idealism that led the founding fathers to adopt the four cardinal principles of freedom—speech, press, assembly, religion. Upon these pillars, the Government of the United States was founded, the nation progressed and the people prospered. Other nations have drawn upon these freedoms for inspiration and guidance.

The greatness of our times will be attained when these fundamental principles are honored in deed as in word. Lip service is not sufficient; in fact, it is a besetting sin. This is particularly true regarding new ideas and movements, not only as they concern the United States, but the whole world as well. A clear case in point is calendar reform, now being considered by the United Nations on the initiative of the Government of India.

How has the Government of the United States received the Indian proposal? What is the status of calendar reform now and what are its prospects?

It would have been more in keeping with the spirit of the four freedoms had the State Department *approved a study* of calendar reform under the aegis of the United Nations, thereby keeping active and alive freedom of *speech* by giving it free argument and debate; freedom of *press* by offering it full opportunity to report on an open exchange of opinion; freedom of *assembly* by upholding the United Nations' laudable effort to consider seriously the revision of the calendar; and freedom of

religion by hearing all the various religious groups, not the dissenting groups only.

Surely this is precisely the situation against which Jefferson warned—a situation in which truth is “by human interposition disarmed of her natural weapons: free argument and debate.”

Furthermore, by shifting the responsibility for calendar reform to Congress and by taking a political stand at the United Nations, has not the State Department weakened its position? Has it not been unmindful of the favorable opinions of many of its own citizens and institutions—the large number of individual letters, the widespread newspaper editorials, the innumerable official resolutions of business organizations, fraternal societies, service clubs, religious denominations, educational and scientific institutions which approve the reform? Many of these are reprinted in the pages of recent issues of this *Journal*. Special attention is called to the forthright resolutions of the National Retail Dry Goods Association and the U. S. Junior Chamber of Commerce (JAYCEES), published on page 98. Certainly calendar reform must not be localized in any one group or any one nation; it belongs to the whole world.

Fortunately this matter can still be adjusted in the American way.

At the 21st session of the Economic and Social Council of the United Nations to be held 17 April—4 May 1956, it is anticipated that a substantial number of member countries of the United Nations will have reported their respective opinions on calendar reform. The United Nations will then decide upon a course of action. The stand and influence of the United States will be far-reaching. The Department of State with an *open mind* can reconsider its present position, can reaffirm its faith in the American tradition—fair play—and can proclaim again its confidence in the four basic freedoms.

The United States Government is not obliged to take a stand on this or that specific proposal for calendar reform, but it does have a clear responsibility to support a study of reform, looking toward the eventual adoption of the one plan that will best serve the interests of all the peoples throughout the world. The World Calendar Association is committed to a specific proposal but it invites study of other plans. Neither the State Department nor any other organization—not even opposing groups—can justifiably refuse this approach.

With such an approach we shall once more affirm with Jefferson that “Almighty God hath created the mind free . . . that truth is great and will prevail if left to herself.”

Elisabeth Achelis

THE WORLD CALENDAR ROUND-THE-WORLD

By Colin Jackson

Professor Colin Jackson, British lawyer, was educated at St. John's College, Oxford. He has lectured widely for organizations such as the East India Association, Overseas League, Royal Naval War College, RAF Staff College; is a regular broadcaster for the British Broadcasting Corporation on its Home, Overseas, North American, Near Eastern, and Far Eastern Services; and has been a visiting professor at several United States universities. This past summer, during his third trip to Asia since the War, Professor Jackson devoted some of his time to visits with government officials, members of Affiliates and Committees of The World Calendar Association, International, and other interested groups, concerning The World Calendar. The following report is the first of two installments. The second installment will appear in the December Journal.

FOR three months I have been busy travelling. My route has taken me from San Francisco to Tokyo and from there on through all the capitals of Asia and the Near East. It has been a tiring journey but also a very fascinating one, for much of my time has been concerned with World Calendar affairs. In each of the countries visited I have talked to their Governments and their leading officials concerned with the discussion of calendar reform in the United Nations. But just as interesting and rewarding have been my discussions with private citizens, professors, doctors, businessmen, about the need for The World Calendar. Then with young people, the students at the universities, I have had a chance in many a late night "free for all" to tell them about the proposal for calendar reform now before the United Nations. And amongst this coming generation of readers I found nothing but enthusiasm

for a change that would simplify and unify life around the world.

The first country I visited after the United States was Japan. The official Government attitude towards calendar reform is a cautious though not hostile one. The Ministry of Foreign Affairs said to me that Japan felt calendar reform would greatly affect the social and economic habits of people around the world. Therefore no move should be made until the most careful research into possible effects had been made. If official opinion was cautious but not unfriendly, unofficially I found a genuine and undisputed support for calendar reform. The new postwar Japan is not bound by many of the age-old and often stultifying religious and social superstitions that affect so many other countries. Modern Japan, too, is pressing ahead with economic reconstruction, and any reform that will simplify and make more

efficient their business life the Japanese are likely to support. It is this background of impatient energy that explains, I think, why I found so much support for calendar reform in cities like Osaka and Tokyo, the centers of the work carried out so successfully by the very able Japanese Affiliate of The World Calendar Association, International, during the last seven years. I outlined to the managing director of one of the largest textile mills in the world in his office in Osaka exactly how calendar reform would reduce costs in industry. With 30,000 employees, he had no difficulty in seeing that here was a scheme he should support.

When in Osaka I addressed a meeting of the Calendar Association of Japan. The President, Dr. Joe Ueta, came down specially from Kyoto to preside, and Dr. Susumu Imoto, the Secretary and Director of the Association, had the satisfaction of seeing a hall full of supporters. A large map-size copy of The World Calendar enabled me to explain graphically just how the reform would help the world. But, from the questions and discussions afterwards, I found that the audience really needed little persuading as to the value of calendar reform.

When in Tokyo I talked to the students of Keiogijuku and Waseda—Japan's two leading private universities. One of the points that appealed to them most was that a perpetual calendar would always mean fixed days for the beginning and ending of semesters, and a definite date for exams. As one of the students said to me, "Today we worry when the semester will begin, when the exams will be and whether we shall pass. With The World Calendar we should be left with

just one small worry, the question of passing."

In Saigon I talked with one or two representatives of the Ministry of Foreign Affairs and the Ministry of Information. So far it seems Vietnam has expressed no opinion on the subject. The unsettled military and political conditions there doubtless account for the Government's preoccupation with purely Vietnamese affairs.

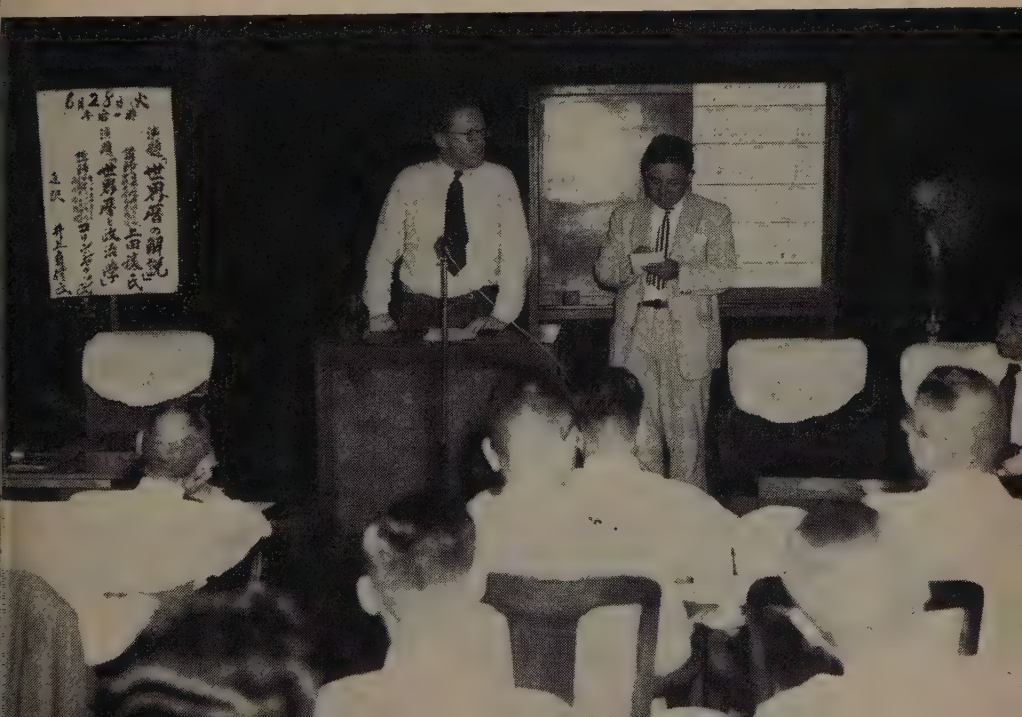
Thailand was a complete and refreshing change from the dark and depressing atmosphere of Saigon. The official view of the Government towards calendar reform has been stated with pleasing and straightforward brevity: "The Government of Thailand are in favour of the proposed Reform." There have been no official qualifications to assent, no diplomatic equivocation. However, the approval of the Government had not, up to the time of my arrival, been followed up by the formation of a National Calendar Reform Committee. With the Government in favor of calendar reform, this was an obvious omission that needed rectifying. In the few days that I was in Bangkok I set about getting such a committee established. As always in these matters, the difficulty was in reaching the right sort of people to undertake such a task. I had a number of "false starts" amongst the Ministry of Foreign Affairs, Chulalankarana University, and the Information Services. Eventually, however, the National Institute of Culture undertook to set up a National Committee. Field Marshal Pibul-Songram, the Premier, whom I had met, is President of the Institute. Lau Lamhabandhu, Assistant to the Secretary General, undertook to look after the details of the committee's

formation. I stressed that we wanted not only government officials working with us but leaders in all fields of public life, doctors, lawyers, university professors and businessmen. To sum up the picture in Thailand, I feel sure that World Calendar believers all over the world may in the future count on loyal support, official and unofficial, in this key Asian country.

Burma was my next stopping-off point. Here the position as regards World Calendar support is more complicated. The official reply of the Government originally indicated that Burma could not support calendar reform due to the omission of a weekday in each year, an omission contrary to their religious practice. On investigation, however, I found that this opposition was not so intransigent as on the surface it appeared. In the first place,

Government officials were obviously surprised when they heard not only of Thailand's official support, but also of the National Committee being formed. Burma and Thailand both take pride in their firm belief in Buddhism. As I pointed out, if Buddhist Thailand could support calendar reform, why not Buddhist Burma? The point, I felt, was not lost! Again, when I talked to the head of the U.N. section of Burma's Foreign Office, U Khin Maung, I felt that he was very ready to listen to the case for The World Calendar. I stressed the essentially secular nature of The World Calendar. I pointed out that the lunar calendar which Burma uses for religious purposes could continue to operate alongside the new World Calendar. As I shall have reason to mention in connection with other countries, this duality of calendars had

Professor Colin Jackson addresses a joint meeting of the Calendar Association of Japan and the Kansai Keizai Club, held in the Dojima Building, Osaka, 28 June. Left to right (standing): Professor Jackson, Sadanobu Inoue, member of the Association who interprets Professor Jackson's talk, and Dr. Joe Ueta, President of the Association. Dr. Susumu Imoto (not in picture) is the Secretary and Director of the Association.



not appeared, up to then, possible to Burma. I think it is a fair comment that vested interests in Burma, as elsewhere, deliberately attempt to confuse religious calendar questions with the entirely separate consideration of a non-denominational international World Calendar. Other Government leaders whom I spoke to, such as U Khin, Chief Information Officer of the Government of Burma, also on explanation displayed a willingness to reconsider the whole question of calendar reform in Burma.

Unofficially, I found a much less rigid attitude on the question of Burma's support of The World Calendar. Once the religious point was explained, I found Burmese quite ready to accept the idea of a reformed calendar that would bring unity, stability and harmony into the world's time. At the University of Rangoon, where I talked to students about calendar reform, it was decided to set up a University Committee to support The World Calendar. A very able young medical student, Sai Moong Tip, was chosen chairman and Sao Hso Horn, secretary. As the University of Rangoon has produced practically every leader in Burma today, one hopes that the present generation of university students, in favor of calendar reform, will change their Government's attitude accordingly when they assume responsibility. Although perhaps I should be more optimistic and forecast a change in approach to calendar reform at a much earlier date!

India is a country that I have visited a number of times and a nation that I have always greatly admired. Not one of the least reasons for my admiration has been India's championing the cause of calendar reform. As H.E. Sardar Swaran

Singh said to me, "We believe that this question of a World Calendar is a serious question that the nations should discuss. That is why we have taken the lead in bringing it before the United Nations. We are not committed to every detail of the proposed reform, but the place for differences to be discussed is, we think, through an agency of the United Nations."

When in India I was, unfortunately, unable to meet that great and distinguished champion of calendar reform, Professor M. N. Saha. It seemed always that when I was in Calcutta he was in Delhi, and vice versa! However, from many prominent people in public life, I heard of the great work he is doing in spearheading calendar reform in India. For this great country itself has a large number of differing calendars that need reconciling. With this complication on the home front, it is hardly surprising that India, through Professor Saha, has been such a strong advocate of World Calendar Reform.

Once again, when in New Delhi, I had the privilege of being granted a private interview with Prime Minister Nehru. As before, it amazed me how this world leader with his immense responsibilities can always find time to give his undivided attention to the extraordinary variety of problems that his visitors raise. I asked him, amongst other things, about India's attitude towards calendar reform. The answer was, as I expected, quite straightforward: "We are in favor of it." But he laughingly remarked that his support for The World Calendar had led the Chief Rabbi of Britain to take the Prime Minister very much to task when they met. Always a realist, Mr. Nehru

went on to say that the main opposition to The World Calendar was apathy. Unless other countries rallied to India and supported calendar reform, then progress towards this much-needed change was bound to be slow.

The same point was put to me when I had tea with another noted supporter of calendar reform, the Minister for Works, Housing and Supply, H. E. Sardar Swaran Singh. And India, I think, is right in calling for more support from other nations for calendar reform. India has performed a great service in bringing the matter before the United Nations. However, she cannot be expected to continue alone in spearheading the cause. The message I felt that both Mr. Nehru and H. E. Sardar Swaran Singh wanted me to take away was that India needed more backing from other nations in the fight for calendar reform.

Internally, as was to be expected under Professor Saha's inspiring leadership, I found calendar reform in India widely supported. In Calcutta, I founded a World Calendar Committee at the University. The University is one of the largest in the world and has produced many great Indian leaders and world figures. The chairman of the committee is a very able young graduate, Biswa Priya Basu. Under his guidance I am sure that calendar reform will flourish at this key institution.

Another key university in India is Aligarh. This University not only has turned out many fine graduates, but it also has a great reputation as a Moslem center of learning and thought in India. Many of its alumni are today political leaders in Pakistan. Because of Aligarh's important position not only in India but

also in the Moslem world, I talked to the students there about calendar reform. Their response was most enthusiastic. And Mohammed Yusuf Ahmed, one of the brightest political science students there, has promised to look after World Calendar Reform interests at the University.

To sum up my impressions of calendar reform strength in India, I would say that the country contains just that necessary mixture of self-interest in reform, plus enlightened and balanced international views, to make India a continuing worthy leader of World Calendar affairs in the United Nations.

Pakistan in the United Nations has been quite firmly opposed to calendar reform on religious grounds. Mohammad Mir Khan voiced these objections again at the last meeting of the Economic and Social Council (ECOSOC) when Pakistan opposed another year being given for government replies.

However, as in Burma, I found that much of Pakistan's objection to calendar reform was based on the mistaken idea that a new World Calendar would replace their own religious calendar. I pointed out that, as things stand now, Pakistan used the Gregorian calendar for some matters—business, international air travel and the United Nations, for instance. The new World Calendar would merely make the Gregorian calendar, as now used by Pakistan and all other countries, a more efficient international timekeeper for the purposes for which it is intended.

When I had an interview with the new Acting Governor General of Pakistan, Major General Iskander Mirza, I put these points to him. General Mirza is

not only able, energetic and popular, he also has the reputation of being extremely outspoken. So I was not surprised when, after listening to me, he said he did not know much about calendar reform, but, from what I had told him, it seemed "a damned good idea!" And he promised to read any materials that The World Calendar Association sent along to him.

Another charming and refreshingly frank Government leader whom I met when in Karachi was Said Hasan, the Secretary of the Ministry of Economic Affairs. Mr. Hasan deals with Economic and Social Council Affairs of the U. N. for Pakistan. We spent a pleasant couple of hours one Sunday discussing the whole question of calendar reform. And, once I was able to convince Mr. Hasan of the essential separation between the Moslem religious calendar and The World Calendar, then his opposition to the proposed calendar disappeared.

Of course it won't be easy to change Pakistan's opposition to The World Calendar. Tradition and superstition are powerful and entrenched opponents to the reform. But before I left Pakistan I was able, I hope, to form the nucleus of an organized support of calendar reform in Pakistan outside the Government. I was fortunate in securing as chairman of a Pakistan Committee of The World Calendar Association a very able Karachi lawyer, Mr. Sharaf Faridi. Mr. Faridi is widely respected not only amongst his own profession, but also in University and Government circles. The beginnings may well be slow in Pakistan, but the foundations, I am sure, for an effective calendar reform movement now exist.

After Pakistan I went on to visit the

Near East. Here the picture regarding calendar reform divides itself quite clearly into the attitude of the three mainly Moslem countries, Lebanon, Syria and Jordan, and the State of Israel.

The Lebanese Government have not yet sent in their reply to the United Nations concerning their attitude towards calendar reform. I talked to Miss Fadoul, the assistant to the head of the U.N. Department of Foreign Affairs who was, unfortunately, indisposed. In coming to their decision I gathered that the Lebanese Government were willing to consider further arguments in favor of The World Calendar. Much more positive was the point of view of the head of the Economic Section of the Foreign Office. In talking with him, I became convinced that there exists no such deep-seated Government opposition to calendar reform as exists in Pakistan. Lebanon is a half-Christian, half-Moslem country, and the recent conciliatory attitude of the Vatican towards calendar reform has undoubtedly had an effect. Beirut, the nation's capital, is a big *entrepôt* port. Lebanon, through its capital, has many international trade connections. And undoubtedly these international commercial ties are strong factors in the background influencing the Lebanese Government to adopt a moderately sympathetic attitude towards calendar reform.

Syria is a traditionalist Moslem country. Although Damascus is a fast expanding city open to modern influences the country is still strongly affected by the strict observance of the Moslem faith. So here, as in Pakistan, I found strong religious pressure against calendar reform. I had a long and interesting meet

ing with Mr. Dalaty, Director of U.N. Affairs for the Government of Syria. He showed me photostatic copies of letters objecting to calendar reform in answer to his circular querying the attitude of various bodies. They came almost exclusively from religious organizations, the Coptic Church, the leaders of the Moslem faith, the Armenian Church. All of them had jumped to the conclusion that The World Calendar would interfere with their religious calendar and observances. None of them seemed to appreciate that in The World Calendar there is no blank day and that World'sday and Leapyear Day each have their name, date and month.

However, Mr. Dalaty himself, I felt, quite understood the essentially secular and international nature of the proposed calendar reform. As if to underline my point, Damascus was preparing for an International Trade Fair. How could this possibly be run on any one religious calendar? How much better for commerce if it were run on The World Calendar!*

Finally in this report, I must mention Jordan. Here too I found the same religious objections founded on a misunderstanding as to the nature of the calendar. However in talking to the Under Secretary for Foreign Affairs, Mr. Bahad-Dine-Towker, I found him quite will-

ing to consider secular as well as religious views about calendar reform. Dr. Giha, the Director of International Affairs in the Ministry of Foreign Affairs, had the same broad-minded view. Jordan is, I feel, unlikely to take a view markedly different to that of other Moslem countries. However the entrenched opposition from religious circles existing in Damascus does not, I think, prevail in Amman.

To sum up my impressions of this part of my World Calendar fact-finding tour, I have become convinced that certainly there exists no deep-rooted opposition to calendar reform that cannot be overcome. I found the Foreign Offices, universities and business generally sympathetic to the idea.

The two main obstacles to calendar reform are simple and powerful. One is religious opposition. This is based on the mistaken idea that the reformed World Calendar would interfere with religious calendars and religious observances. The second obstacle to calendar reform is simply apathy. Far too many intelligent people fail to realize the enormous and immediate benefits that would result from calendar reform. Far too often the cry is, "Yes, we agree it's a good idea, but what's the hurry?" Apathy and religious opposition are breaking down. But it will need a prolonged, sustained and international effort before these barriers are overcome and our ideal of a universal perpetual World Calendar is achieved.

* *Editor's Note:* In 1948 the Syrian Republic instructed their delegation to the United Nations "to support the resolution for appointment of an *ad hoc* committee to study and report on adoption of the World Calendar."

BUSINESS ENEMY NO. 1

From Atlantic City Press, New Jersey, and many other newspapers

THE calendar you looked at this morning has been described by a noted businessman as "a smooth and subtle thief." He called it that—and he was right—because it takes away some of your enjoyment of life and some of your money.

Our calendar has existed—in its present form—for centuries. Yet, strange as it might seem, the title "Business Enemy No. 1" could be awarded to this common element in our society!

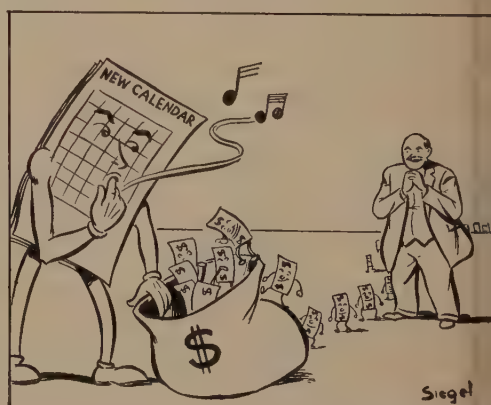
Adjustment of business to the vagaries of the present calendar costs businessmen millions of dollars annually. It never contains the same combination of working days, week-ends, or holidays; months and pay dates vary; there is no uniform pattern anywhere!

Result—constant adjustment in accounting, budgeting, production schedules, payrolls, and other vital office systems. This adds to the consumer's costs—and a holiday falling on a Saturday often deprives the worker of an extra day of leisure.

After so many centuries, it would seem unbelievable that a program of "calendar revision" could actually get started. . . . But, on 28 July 1954, calendar reform came within our reach. On that date the Economic and Social Council of the United Nations unanimously adopted a resolution, introduced by India, asking all governments to "furnish their views . . . on the desirability of calendar reform."

The major plan under consideration by the Council is The World Calendar containing four equal quarters and the twelve present months, balanced by the observance of a world holiday at the end of each year.

A study of The World Calendar by Walter Mitchell, Jr., former director of business surveys for Dun & Bradstreet, shows that its adoption would mean "saving



of several hundred million dollars per year for American business and industry."

Mitchell gathered information from business firms of all types, in many fields, ranging from large corporations to small stores. A typical reaction to our present calendar was: "It complicates the handling of sales management and promotion campaigns. It affects the human relations between employees and executives."

"Most businessmen felt that reform of the calendar is long overdue," reported Mitchell. "My study of the economic costs of the present calendar was confined to the United States. But I am sure that businessmen in every country are aware of the fact that today's inefficient calendar takes money *out* of everyone's pocket."

From a businessman's point of view, what does The World Calendar mean?

Mitchell reminds us that one of the most significant things is the curious fact that a year of 365 days is divisible only by 5, not much help in business scheduling. In contrast, the proposed 364-day operating cycle of The World Calendar is divisible by 2, 4, 7, 13, 14, 26, 28, 52, 91, and 182.

It can be divided into equal halves and equal quarters of 91 days (13 weeks) each; it encompasses exactly 52 weeks of 7 days each, plus the new World Holiday; in its arrangement all the various time units—days, weeks, months, quarter divisions (approximating the seasons)—agree at the close of every quarter-year. Thus perfect coordination is achieved.

Under The World Calendar system, most holidays would be moved to week-end positions, preferably Mondays. For example, Christmas would fall on Monday, 25 December. (We already have a widespread custom of working on Columbus Day and, in return, taking a holiday the Friday after Thanksgiving.)

Monday holidays under the *present* calendar are unlikely as this would cause the holiday to fall on *different dates* each year.

With present holidays often falling on a Tuesday or Wednesday, a mid-week shutdown is caused—with the employer's loss of money as the end result. With a stabilized calendar, these and other difficulties would be absent or greatly diminished.

The story of Standard Time provides an instructive analogy: before the days of railroads there was little need for Standard Time. Each town set its clocks by some local source, such as a jeweler's chronometer (and the jewelers seldom agreed on the *same* time) or a retired sea captain's sightings on the sun. Resultant confusion was reminiscent of the adage "the best place to start work is where you are!"

The railroads soon found it could be embarrassing to operate without some standard of time, particularly when it was necessary to run trains in both directions on the same track. Thus on Sunday, 11 November 1883, Standard Time was put into effect by the railroads.

Proponents of The World Calendar system are confident that American businessmen will soon reach a similar conclusion, will realize that an orderly calendar would eliminate several hundred million dollars worth of waste per annum. Workers, many of them union members, enjoy the idea of elongated holiday week-ends.

That's why workers and management alike are cheering for the new scientific, civil calendar—a major achievement of the 20th century.

Professor Campaigns for Revised Calendar

(An Associated Press Newsfeature by
Julius Golden that appeared in newspapers
throughout the United States)

OUR present calendar is an abomination, says Dr. Martin Fleck, University of New Mexico biology professor. He has made himself an expert on the subject. Now he has turned salesman for The World Calendar.

"I blow my top when someone declares that our present-day calendar is a divine document and infallible," he says. "It has been changed many times. I counted 63 different changes ranging from 7000 B.C. to 1934 A.D. and I'm sure I didn't get them all."

Fleck has been making speeches on the calendar for almost 15 years. . . .

Fleck bases his talks on the calendar's "impact on civilization." He uses believe-it-or-not illustrations to prove his point. For instance, a calendar initiated the first deck of cards and started the Gypsy occupation of fortune telling.

The present calendar is not stable, he says.

"We know our birthdate but not our birthday. Some months have four Saturdays and Sundays and some have five making the number of working days in two months vary as much as 12½ per cent at times."

The World Calendar never changes, Fleck says. The 1st of January would always be a Sunday. January would have 31 days, February 30, March 30, April 31, and so on in a 31-30-30 line.

Each quarter would have 91 days, he said, instead of the present 90 in the first quarter, 91 the second and 92 each the third and fourth.

"Every month would have 26 working days and every day of the year would have the same date every year," he said.

"Of course, this only adds up to 364 days so the 365th day would be an international holiday dedicated to peace and good will. . . ."

Fleck says we have been living under the

Gregorian calendar in this country since 1752.

"Pope Gregory the XIII started this calendar when the old Julian calendar was out of time with the sun in 1582, but the Protestant countries didn't start using it until 1752."

The latter change in the calendars forced a drop of 11 days to bring the new calendar in time with the sun.

Fleck's prize yarn concerns an old Egyptian calendar.

"This calendar had 52 cards—one for each week," he said. "There was a two-way design for day and night and four symbols for the seasons, called air, earth, fire and water."

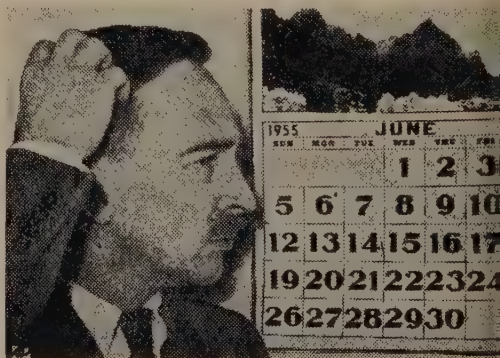
Fleck says our present card decks come from this. A club on a card is just a corruption of an old five-pointed star.

"Take a look at one of the jacks," he says. "He has a staff in his hand with lines on it. It seems that one of the sons of the Pharaoh had to measure the depth of the Nile. Also, add up all the numbers, counting the jack as 11 and queen as 12 and king as 13. The 52 cards equal 364."

"For the 365th day, the Egyptians had a special holiday card considered lucky. I'm told if you get a joker to an inside straight, it's still a lucky card."

"Some Egyptian priests had a good racket by telling fortunes from the cards. They traveled to new fields and became known as Gypsies," he says.

NO SENSE!—DR. MARTIN FLECK LOOKS OVER A MODERN CALENDAR AND WONDERS HOW IT GOT THAT WAY



A BETTER CALENDAR MEANS A BETTER WORLD

During the past twenty-five years Elisabeth Achelis, president of The World Calendar Association, has addressed business, scientific, cultural and religious groups in the United States and many parts of the world on The World Calendar. In the course of her activities she has conferred with world leaders and appeared before international organizations. The address reproduced here represents the convictions and aspirations which have led her to work for The World Calendar since 1930. It is made available in this form as a contribution to a broader understanding of a proposal dedicated to the well-being of peoples and institutions throughout the world.

AN opportunity to speak for a fundamental reform which will bring benefits to everybody seldom occurs in a lifetime. That is why I am particularly happy to tell you about The World Calendar plan—a simple, sensible scientific proposal for a better calendar, now being considered by all the governments of the world.

Although the calendar affects our lives in many ways—in our work and in our play, in our budgets and in our holidays, in almost everything we do—few of us pause to consider whether it serves as well as it should. Most of us are vaguely aware that we have to get new calendars every year. Most of us realize that we have to spend a good deal of time in figuring out just when Christmas comes each year, when Thanksgiving arrives, what days our anniversaries fall on—but beyond that most people do not stop to consider whether the present calendar could be improved or whether it is out of step with the modern world.

“Oh, the calendar, what about it?” we say with some surprise, when the ques-

tion of calendar reform comes up. “Yes, it’s a nuisance at times, but is it worth the trouble to change it?”

My answer is: “It would be worth a good deal of trouble to change a system which costs every one of us time, energy and money—and throws everyone’s life off balance year after year.”

But the fact is that The World Calendar gives us a way of improving the calendar smoothly and easily, without a lot of fuss and bother. The World Calendar plan offers us one of the simplest reforms in the history of mankind.

I believe there are six major reasons for adopting The World Calendar at the earliest possible moment. I will cite each of these reasons briefly and give you the evidence supporting each one of them.

First and foremost—a better calendar means a better world. When the nations agree on a better calendar plan, they will draw closer together. There will be fewer sources of friction, more sources of harmony.

The World Calendar plan contains an idea which emphasizes the unity of man-

kind—the fundamental unity of the human race as a brotherhood under God, the unity that exists despite all the jarring discords and rancorous debates which go on between nations and within nations.

This idea is the provision of a World-day at the end of each year. On this day men will forget that they are black or white, brown or yellow, Catholics or Protestants, Mohammedans or Jews, Americans or Russians. It will be a day dedicated to peace, to songs of joy, to friendly voices speaking of universal love.

Under God's will, men must struggle and work out their destinies in different ways. In the 364 days of the ordinary year, there are bound to be arguments, bound to be clashes of opinion, bound to be expressions of ill-will and antagonism. Out of all this ferment, many achievements come—and no one should seek to impose an artificial unity, an enforced harmony, all year round.

The World Calendar provides well for the workaday world. It keeps the twelve months we use now, but organizes these months in a better pattern—a pattern of perpetual order and balance. And then at the end of each year comes the climax—the World-day, celebrated everywhere upon the earth.

The celebration of that day, the vision of human unity held aloft each year for men to gaze upon and remember, will certainly help to make this world a better world than the one we live in today.

Now let me give you my second reason for strongly supporting The World Calendar. My first reason was idealistic, rising from the spirit, because I believe the spirit is of first importance in any human endeavor. My second reason is practical,

drawn from man's probing into the secrets of the stars, the movements of the earth circling the sun.

The World Calendar is soundly scientific. It has the backing of many leading scientists around the globe. It is based on firm mathematics.

Here is what Sir Harold Spencer Jones, the Astronomer Royal of Great Britain, has to say: "Many of the foremost astronomers in all countries have expressed themselves in favor of The World Calendar. I am personally in favor of this plan."

In the files of The World Calendar Association are hundreds of letters from scientists supporting the plan. Let me quote from a few of them. A noted researcher at the Massachusetts Institute of Technology said: "This would seem to be an appropriate time to inaugurate what must inevitably mean a change to the good in our calendar arrangement." A Dutch astronomer wrote: "This World Calendar is an enormous improvement." A former president of the Royal Astronomical Society of Canada declared: "The World Calendar is very simple, retaining the twelve months, it is perpetual, every month having exactly 26 weekdays with equal quarters."

From a Norwegian scientist came this statement: "Revision of the calendar is desirable." From an Argentine came this one: "The present calendar has defects which everyone recognizes." From Jamaica, another researcher wrote: "The question is not whether we shall have reform, but how soon shall we get it."

I could quote for hours from such letters, written by biologists, chemists, engineers, mathematicians, scientists in all fields. Outstanding organizations such as

the American Association for the Advancement of Science have gone on record for The World Calendar again and again.

So you can see why I feel my second major reason for supporting The World Calendar is on solid ground—with so many scientists endorsing it.

A third excellent reason for advocating this plan, it seems to me, is the overwhelming mass of data indicating that the present calendar takes money out of the pockets of every family. It makes a small but steady drain on every person's spendable income—and it makes a sizable drain on the operating costs of business and industry.

The latest survey which demonstrated this point conclusively was conducted by Walter Mitchell, Jr., a former managing director of the Controllars Institute and a widely-known consultant in management planning and economic analysis. On the basis of reports obtained from a number of companies, large and small, Mitchell concluded: "An orderly calendar could eliminate several hundred million dollars worth of waste per annum in the United States alone. This may seem small in a country whose gross national product runs to hundreds of billions of dollars, but surely we as a nation are not yet disposed to ignore the opportunity to divert several hundred million dollars of waste into more profitable and useful channels, particularly when it can be done without damage to anyone's rights or prosperity and without violence to traditions."

Hundreds of millions of dollars could be saved through the adoption of The World Calendar by business firms. Think of what that would mean to the em-

ployees of those firms, in terms of more secure employment and possibly more dollars in their pay envelopes. Think of what it would mean to the stockholders of such companies. Think of what it would mean to the executive managers, in eliminating waste and many unnecessary problems.

Mr. Mitchell found companies in all parts of the country were adversely affected by the present calendar. Here are some of the examples he cited in his report.

The Lockheed Aircraft Company pays all its employees—from the chairman of the board to sweepers in the factories—on a weekly basis, because this simplifies the payroll operation. However, it reports corporation earnings and taxes on a flat calendar year. The company estimates that it costs about \$100,000 each year to make the computations and adjustments necessary in its records. Executives believe that a calendar containing exactly 52 weeks—as The World Calendar does—would enable them to eliminate as much as one-quarter of this cost.

In Cleveland, Ohio, the Lincoln Electric Company declared that production scheduling was done in detail at least 90 days ahead, with six persons involved in the work on a full-time basis. It was estimated that the work would be at least 2 or 3 per cent less expensive under a stabilized calendar.

The National Office Management Association stated that wandering holidays consumed much executive time and effort. For instance, a considerable number of special surveys were made during the fall of 1954 by NOMA chapters and by other organizations in various cities regarding the handling of the Christmas

holiday. The question was, essentially: should Friday or Monday, or no extra holiday, be given when Christmas falls on Saturday? Under The World Calendar plan no time or energy would have to be expended on such a problem, because Christmas would always fall on Monday, 25 December.

These examples, drawn at random from the long and thorough study made by Mr. Mitchell, are sufficient to show you how the present inefficient calendar affects business and industry. And since most people in the United States depend upon business and industry for their income, most of us are directly affected by the budget burdens inflicted by the calendar now in use.

My fourth fundamental reason for advocating the adoption of The World Calendar is that we need a calendar which will enable families to plan holidays together, to count on certain anniversaries arriving on definite days. The family is the key unit in our society. Anything which adds to the stability of the family adds to the strength of our civilization.

Under the present changeable calendar, a husband and wife who have jobs with different companies have no way of being sure that their holidays will coincide. When Christmas or some other important holiday comes on a Saturday, the wife may be given the previous Friday off, the husband may be given the following Monday. It is impossible for them to make good plans under such a system.

The World Calendar is stable, perpetual, perfectly balanced. Once it goes into effect, everyone will know when major holidays will fall. Employers will be able to get together and develop con-

sistent arrangements which will assure equal benefits to all.

A fifth vital reason for adoption of the scientific calendar is the need for simplicity in our daily lives. We have too many complexities in our society today—too many nagging worries, too many irritations. The World Calendar would give us a smooth and even flow of days—a dependable calendar we could always count on.

In addition to the World Day at the end of every year, this calendar plan provides for a Leapyear Day every four years at the end of June. This is the perfect time for a holiday, for a day of rest and recreation, a day of amusement and wholesome fun. Instead of arriving in the dreary month of February, the Leapyear Day would come in the most pleasant month of the year.

My sixth reason for urging acceptance of The World Calendar is that it is a logical development, in tune with our times. It is sensible, practical, and obviously necessary in a world linked by so many channels of communication, so many methods of fast transportation.

It has the plain common-sense appeal which finally secured the adoption of Standard Time. Today we accept Standard Time as a commonplace thing in our lives. We cannot imagine how people could function effectively without Standard Time zones.

But the fact is that it took a great deal of effort, a great deal of persuasion, a great deal of determination, to get people in the United States to use Standard Time. Before the days of the railroads, each town set its clocks by some local source such as a jeweler's chronometer (and the jewelers then seldom agreed on

the same time) or a retired sea captain's sightings on the sun.

The resulting confusion has been well described in these words: "The railroads found it difficult to operate on anything resembling a schedule. At noon, sun time, in Chicago it was 12:31 in Pittsburgh, 12:24 in Cleveland, 11:50 in St. Louis and 11:27 in Omaha. There were some twenty-seven local times in Michigan, thirty-eight in Wisconsin, twenty-seven in Illinois and twenty-three in Indiana.

"In Pittsburgh railroads used no less than six standards of time for the arrival and departure of trains. In the Buffalo station there were three clocks, each with a different time for different trains. It has been estimated that in 1883 there were about a hundred different time zones operating in the country, none of which was clearly definable. The railroads alone operated under sixty-eight local times."

The railroads soon found it could be embarrassing to operate without some standard of time, particularly when it was necessary to run trains in both directions on the same track. So on Sunday, 18 November 1883, Standard Time was put into effect.

Although there were some objections on religious and political grounds, most people liked the idea and found it practical. State legislatures soon began to legalize the new time. Federal action, however, was very slow. It did not come until 19 March 1918.

The position by our federal government in the field of calendar reform has been reactionary. The United States has not cooperated with the government of

India in its proposal for a study of calendar reform by the Economic and Social Council of the United Nations.

The Council unanimously adopted a resolution on 28 July 1954, asking all governments to "furnish their views . . . on the desirability of calendar reform." The future position the United States government may take on this urgently needed reform will depend in large part upon expressions of public opinion in the United States.

So all of us must make our views known on the issue at the earliest possible moment. Your opinions count. When you have the opportunity, sit down and write a letter to the President, the Secretary of State and to those you think will help the Cause. This is the way of democracy.

I have given you my six fundamental reasons for strongly supporting The World Calendar. In closing, let me review these reasons for you: first, I believe a better calendar means a better world—greater unity of mankind, a greater chance for peace; second, The World Calendar is scientific and backed by leaders in science; third, it will save time and money for everybody; fourth, it will stabilize holidays and bring families together; fifth, it brings simplicity and order into our daily lives; and sixth, it is a logical development, urgently needed in the modern world.

For all these reasons, I am certain that this vital reform is bound to come.

It will bring benefits to all humanity.

It is in accordance with God's plan for stability and balance in the universe.

So it will come—and come soon.



Time, calendar date, and year are shown for Earth and Mars in the Levitt-Mentzer clock. The numbers around the face indicate Mars time, and the three smaller dials (here arbitrarily set) register Martian date, terrestrial time, and terrestrial date. The clock, which is 16 by 16 inches in size, can also be run at over 2000 times its normal rate to serve as a computing device for time-conversion problems.

BASIC DATA FOR A MARS CLOCK

Sidereal period of Mars	=	686.9797 solar days.
The Martian sidereal day	=	24 ^h 37 ^m 22 ^s .6679 in mean solar units,
	=	1.02595680 solar days.
686.9797 ÷ 1.02595680	=	669.599051 Martian sidereal days,
	=	668.599051 Martian solar days.
One Martian solar day	=	1 + 1/668.599051 Martian sidereal days.
The excess of the Martian solar day over its sidereal day is		
1.02595680 ÷ 668.599051	=	2 ^m 12 ^s .5791 in mean solar units.
The Martian solar day	=	24 ^h 39 ^m 35 ^s .2470 mean solar units.

MARS CLOCK AND CALENDAR

By Dr. I. M. Levitt

Dr. Levitt is the Director of the Fels Planetarium, The Franklin Institute, Philadelphia. This article is reprinted from Sky and Telescope magazine, published at Harvard Observatory.

ONE of the first pieces of scientific apparatus that the world's future pioneers into outer space will require is a timepiece that accurately records the 24 hours of the earth's day, and which may be instantly compared with time established for a planet, such as Mars, that may be the object of exploration. Even the return to earth will probably have to be started at a precise hour, minute, and second of earth time, in order to rendezvous with an earth-satellite station.

The construction of a chronometer that ties together the time on the earth and on Mars is necessarily complicated, because of the difference in rotation periods for these two planets. The earth turns once in 23 hours, 56 minutes, and 4 seconds, which we call the sidereal day. However, the day we normally use is the mean solar day of 24 hours by our clocks. Mars rotates more slowly than the earth—its sidereal day is 24 hours, 37 minutes, and 23 seconds. Its solar day is about 2.7 per cent longer than the solar day on earth.

The Hamilton space clock illustrated here was constructed from the writer's design by Ralph B. Mentzer, assistant director of the process development laboratory of the Hamilton Watch Company. To correlate the Martian day, month, and year with our own, computations were

based on Lowell's rotation period of 24 hours, 37 minutes, 22.58 seconds, for Mars. Since this work was done, Joseph Ashbrook has presented evidence that Lowell's period is 0.088 second too short. The figures in this article have been amended from those originally announced to correspond with the new value for Mars' rotation.

The large dial on the clock indicates Martian time, and is connected by gears to the small, lower dial indicating Greenwich civil or Universal time on earth. The earth pointer makes one full revolution in 24 hours, but the Martian pointer requires 39.6 minutes longer.

Since Mars is about $1\frac{1}{2}$ times as far from the sun as the earth, its year is nearly twice as long. Mars requires 686.9797 earth days or 668.5991 Mars days to swing around the sun once. Our two simultaneous calendars have been set to begin with the Julian Day epoch, 1 January, 4713 B.C. This date is selected as the start of Martian year 0. Using the 668.6-day year for Mars brings 1 January, 1954, into the year 3641 M.Y. (Mars Year) on this Martian calendar.

On the clock, two similar dials show the year, month, and day, one for each planet. The Martian year has been arbitrarily divided into 12 months, eight of 56 days and four of 55 days, bearing

A Calendar for Mars

JANUARY

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FEBRUARY

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MARCH

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MAY

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JUNE

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JULY

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AUGUST

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SEPTEMBER

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OCTOBER

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NOVEMBER

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DECEMBER

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MARTIAN CALENDAR DATA

January 1, 1954, is 2,434,743.5 solar days after January 1, 4713 B. C., Greenwich noon. Since $2,434,743.5 \div 668.599051$ is $3641.5+$, January 1, 1954, falls in the Martian year 3641.

We adopt 668.6 for the number of Martian solar days in the Mars calendar year. Let two years out of every five be ordinary years of 668 days; the others will have 669 days. The calendar year is too long by $0.6 - 0.599051$, which is 0.000949 day per year. This means that the calendar year will be out one day in about 1,000 years. Therefore, drop one day every 10th century.

Then the calendar year is $0.001 - 0.000949$, or 0.000051 day too long, but the error amounts to only one day in 20,000 years.

the same names as those on the earth, but distinguished by a subscript letter "m." These months have days numbered up to 56, instead of to a maximum of 31. The four quarters are equal; the first and second months of each quarter have 56 days and the third has 55.

As the week is also arbitrary (both on the earth and Mars), with no relation to astronomical events, we may use a seven-day week for Mars, where it fits a convenient eight times into the 56-day months. But it is troublesome there, too, for some months are only 55 days long; thus, just as in the case of our own present calendar, the week does not fit into the year exactly. In our proposed calendar, however, the last Saturday of each 55-day month is omitted, thereby keeping the weeks in step with the months throughout the year.

Mars has seasons very much like the earth's, because its axis is tipped away from the pole of its orbit about 25 degrees, corresponding closely to the $23\frac{1}{2}$ -degree angle for the earth's axis. Therefore, the sun appears to move north and south in the Martian sky during the planet's revolution around the sun. Each season is, of course, nearly twice as long as are ours.

It is with the seasons that a calendar must keep step. To produce on Mars what corresponds to the earth's tropical year, it is necessary to include 0.6 day at the end of the year. This interval corresponds to the extra quarter day of our years, which we take care of at four-year intervals by inserting a leap day. On Mars, we propose adding a day every three out of five years—the first and

fourth years to contain 668 days, the other three years 669 days, and in these longer years December is given the extra day.

Just as the simple leap-year rule is not enough for the earth, and the Gregorian calendar correction has to be added, so on Mars there is still 0.00095 day per year to account for. Therefore, each tenth century year, for instance, 4000, 5000, M.Y., will not be a leap year, in order to lose a day. After these adjustments, the Martian calendar will be in error by only one day in 20,000 years. This accuracy far surpasses our own Gregorian calendar, which is out one day every 3,000 years.

Built by Mr. Mentzer in his home workshop, the clock has almost 400 working parts. The basic motive power is a laboratory-type heavy-duty synchronous motor, 60 cycle, which provides sufficient power for a "time flyer." The device permits accelerating the clock by any amount to more than 2,000 times the clock's normal rate. This is achieved through an overhead-running clutch to bring into operation a high-speed aircraft-type geared-head series motor which is manually controlled by a variable transformer.

The experimental clock is really a computing mechanism, and can be used for demonstration purposes. A full 24-hour earth day can be observed in 45 seconds. The month and year indicators are 35-mm. film bands. We have projected the clock into the future, and its film strips indicate the course of time for a 20-year interval, 1 January, 1970, to 31 December, 1989, earth dates.

Not Only Thing U.N. Would Change

(Indianapolis Star)

LET us be done with petty things and consider a cause, like The World Calendar. We had lost sight of that proposed improvement until William H. Oatis, Marion, Indiana, scholar and reporter who observes the United Nations for the Associated Press, brought the latest facts to light.

Proponents of the four-square calendar plan have scrapped their old target date of 1 January 1956, and now think in terms of 1 January 1961, to make the change once and for all, Oatis relates. They seem to have run into slight difficulties, such as lack of interest. But are they downhearted? No.

Oddly enough, chief objector to The World Calendar is the United States, according to Oatis' report. This seems capricious in a country that is dedicated to change. We change our cars for a new model every year or two, we change our places of residence more often than any other people in the world.

We even change our minds once in a great while. But when it comes to the calendar we're set in our ways. We're satisfied with a system that has been in use since the year 1582. Can you name another convenience available in 1582 that hasn't been outmoded?

Perversely, our addiction to change may be the reason underlying this dearth of enthusiasm for changing the calendar. The old, or present, calendar is always new in the sense that it changes every year. Maybe The World Calendar runs against the American grain because it won't change, once established. Anything that permanent is contrary to nature.

The World, or perpetual, Calendar would facilitate quarterly and semi-annual statis-

tical comparisons by dividing the year into four equal parts. And it would simplify remembering birthdays, etc., because corresponding dates in different years would always fall on the same day of the week. You could plan ahead.

It sounds like a good idea. Maybe its proponents would get some action if they left a couple of loopholes so we could tamper with it once in a while, like the clocks. Considering the extent of foreign trade and travel in this day and age, the confusion would be charming.

Meanwhile, let champions of The World Calendar be of good cheer. As Tibullus said "Hope ever urges on, and tells us tomorrow will be better."

By What Right?

By BRISTOW ADAMS

(Professor Emeritus, Cornell University)

IT was a shock when someone in the State Department opposed calendar reform and told the United Nations that The World Calendar "would serve no useful purpose."

The shock had three distinct jolts.

The first came to supporters of a new and better way of measuring time, instead of the archaic and chaotic system now used.

The second came to all as a surprise that a great nation, whose citizens have been taught that it is progressive and forward-looking, should show the world a sad case of neophobia, or fear of something new.

The third has the most serious import. The growing tendency, in a nation proud of its democracy, to issue fiat decrees from the top, instead of from the voice of the people, is a dangerous tendency.

Since when has an anonymous voice in the State Department supplanted the opportunity of the nation to express itself through its elected representatives? Of course, the Executive branch of the government, which includes the State Department, has the power to make treaties, but only "with the advice and consent of the Senate." Is a mandatory communication to the United Nations interpreted as something in the nature of a treaty?

For three good reasons all Americans resent the usurpation of rights.



CALENDRIANIC SKETCH*

By Pasteur Jules Jézéquel

President, National Council of L'Amitié Internationale, Pau, France

Translated from the French

THE scene is a public garden. Huge trees shade the benches scattered among the flower beds in full bloom. The garden commands a view of hills stretching toward a chain of high mountains, the summits of which are crowned with snow.

The situation is a magnificent one. Yet there are few people to enjoy it. Alone on a bench, a gentleman is reading a magazine with a brightly colored cover. His name is Durand. He is a former professor of mathematics. He is short and quite rotund.

Interrupting his reading, he lifts his head and sees his friend, Mr. Martin, coming toward him. Mr. Martin sits down on the bench beside Mr. Durand. They are of approximately the same age, and have the same look about them—that of middle-class intellectuals. Mr. Martin is a retired professor of Latin literature. They have taught for years in the same school and are intimate friends.

Mr. Durand, who upon seeing the approach of his friend has put his magazine down on the bench, now picks it up to put it in his pocket. Mr. Martin, noticing the movement, inquires:

M: What were you reading when I came along?

D: An article on calendar reform.

M (surprised): An article on what?

D: An article on calendar reform.

M (who has evidently never given any thought to the matter): What calendar?

D: Our calendar, the Gregorian calendar.

M: Is there any need to reform it? It seems to me it's perfectly all right as it is. Why meddle with such a venerable institution and inject trouble into well-established habits?

D: This institution isn't so very venerable. It isn't more than three centuries old in all, and it's only been recently that all the great countries of the world have adopted it.

M: I see. But it has won general acceptance. It's good enough to be left alone. What objection do you have to it?

D: There is an ever-growing current of opinion in opposition to the Gregorian calendar. Businessmen in particular are strongly critical of it. They complain that its unequal months and quarters complicate statistics, interfere with the regularity

*The word *calendrianic* was coined by the author, from the Latin *calendarium*.

of work, cause numerous inconveniences and result in considerable waste. The movement to reform this calendar has become so strong that upon the demand of the Indian Government, the Economic and Social Council of the United Nations has before it the question of "The World Calendar" with the view of replacing the calendar presently in use.

M (sarcastic): World? But isn't our present calendar in world use? You just said that all the great nations have adopted it.

D: That's true. But that doesn't make it The World Calendar. There are many different calendars—solar, luni-solar or simply lunar. This situation cannot help but cause trouble, confusion and disorder in the affairs of the world.

M: For myself, I don't see any such disorder. I'm perfectly happy with the calendar the way it is. To want to reform it is to try to improve on something which is already good enough, and everybody knows that that's always a dangerous venture. Your reformers remind me of a bunch of muddleheads looking for noon at two o'clock. They're trying to ferret out awfully small game.

D: Big industrialists and men of affairs aren't usually regarded as visionaries. On the contrary, they're generally considered to be pretty realistic. Nevertheless, they're the ones who are the most insistent on calendar reform.

M: But if we're to listen to these realists, then it's they who are trying to upset our most deeply rooted habits. The present calendar is so much a part of our way of life that if it's changed, we'll be completely disoriented. It'll knock the ground out from under our feet.

D: The same objections have been raised, the same fears expressed, every time an important advance has been made. But these objections have evaporated in the face of the benefits produced by the new measures. Don't you remember the hue and cry that was raised when the first automobiles came out? The horseless carriages? They were supposed to be ridiculous, frightful. They were an offense to the eyes. Someone even went so far as to have mechanical horses made to attach to his automobile. That's what strikes us as ridiculous today. Remember too what was said when they first started recording music on disks. Canned music, people exclaimed. The "Eroica" of Beethoven in a box: what kind of an idea was that? It would be the end of music. But who is there today that doesn't admire the procedure that enables us to listen to the greatest orchestras even when we are in the farthest depths of the wilderness? Far from hurting the art of music, records have encouraged a taste for it and made it known to people who would otherwise have been entirely cut off from it.

M: Possibly. But I can't get very enthusiastic about the prospect of an eternally symmetrical year. The idea that 2 January will always fall on a Monday and 1 July will always be a Sunday, forever and ever till the end of time—that gives me the cold chills. Your standardized ephemeris depresses me. I have the feeling that you're taking me into a fixed, rigid world where there will be no room for fantasy, humor or the unexpected, where there will be nothing to do but yawn with boredom.

D: The picture you draw makes me shudder. But if you want to look at it that

way, I can go you one better. I believe you were born, my good friend, on 31 May. Well with the perpetual calendar you couldn't celebrate your birthday any more. The date of your birth would have disappeared, for the month of May, in the new calendar, would have only thirty days. But would that be such a catastrophe? Your friends could express their friendship for you on 30 May, the day before, as leap-year children do, and their demonstration would be none the less sincere.

M: I have been convinced, and I can see that such an eclipse of my birthday would not have world-shaking importance.

D: None of the other objections to the adoption of a perpetual calendar have any world-shaking importance either. But what does have immense importance is that the adoption of such a reform would imply that all men and all peoples had decided at last to take the same action and would thus prove that they were capable of understanding each other. This general agreement to take a common step would have limitless repercussions. Such an advance would immediately give rise to improvements in a multiplicity of fields, and would open before us the radiant prospect of a world on the march toward peace.

TWO ANNIVERSARIES

ON 21 October The World Calendar Association observes its twenty-fifth anniversary. Three days later—on 24 October—the United Nations celebrates its tenth birthday. With The World Calendar now before the United Nations, these almost concurrent milestones take on special significance.

The World Calendar Association salutes the United Nations on its important anniversary with the hope that it will continue to grow in service to all mankind. This it can do if it espouses forward-looking causes with courage and imagination. Among these causes is that of calendar reform.

Virtually all thoughtful individuals and progressive institutions agree that the reform itself is long overdue and increasingly imperative. The establishment of a United Nations' committee to study the various aspects of calendar reform, preparatory to the adoption of a civil, scientific calendar that best serves the needs of the peoples of the world, would help to give the twenty-fifth year of The World Calendar Association and the tenth year of the United Nations a memorable place in history.

World Calendar Boils to Top

By GILBERT LOVE

(Pittsburgh, Pennsylvania, Press)

THIS is 2 March, but six or seven years from now the date might be 30 February. We may finally be getting around to modernizing our calendar.

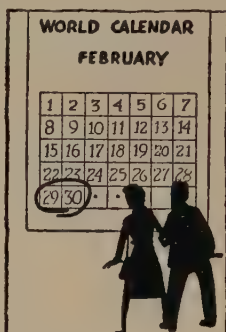
The change would give poor little February two more days, although that isn't the reason for the move.

The reason is that the present calendar is a very unsatisfactory patchwork. It was devised in 45 B.C., and somewhat improved in 1582 A.D. Maybe it worked fairly well when the ox cart was an ultra-modern vehicle and people didn't much care what day it was. In recent years it has become more and more unsatisfactory, even when decorated with Marilyn Monroe or Niagara Falls.

Under the present system—or lack of the same—we have to recite “Thirty days has September, April, June and November” to recall the number of days in any month. Birthdays, wedding anniversaries and such are seldom on the proper weekday. Quarters and half-years aren't the same length.

For those who must plan for the future, or compare one period with another, this is a mess.

Arthur Kaufmann, Philadelphia department store executive, is quoted in the *Saturday Review of Literature* as saying: “At present we have seven kinds of Januaries, 14 kinds of Februaries, and seven kinds each of all the other months. How can a department store accurately compare its sales, say, in December of 1954, which had four Saturdays, with sales in December 1955, which has five Saturdays?”



The trouble is that the earth goes around the sun in just about 365 days. Neither our weeks nor our months—our quarters or half-years—will fit into that number without having some fractions left over.

Back in 1834 an Italian priest hit upon an apparent solution to the knotty problem. It was, simply, to drop a day out of the counting by creating an extra holiday that wouldn't bear the name of one of the days. The remaining 364 days would then be exactly 52 weeks, and other adjustments could be made.

That basic idea eventually led to the creation of the so-called World Calendar, which finally has boiled to the top of all the plans that have been suggested. . . .

All over the globe there's a lot of sentiment in favor of adopting The World Calendar. Last summer the United Nations Economic and Social Council took a first step by asking all governments to study the matter and report their views by May, 1955. If enough countries favor calendar reform, the Council will ask the General Assembly to draw up a resolution to be submitted to governments everywhere for formal ratification.

Strangely enough, the United States and Great Britain have been dragging their heels on this. If you think this country should approve the new calendar, write Secretary of State John Foster Dulles.

If the defects of the Indian calendar system can be removed, the reform will be of great benefit.—S. S. Telkikar, M.P., Kandhar, Hyderabad.

As a member of the India Parliament, I am in full sympathy with the much-needed proposals for calendar reform.—Onkar Nath, Connaught Circus, Delhi.

We know how fundamentally important is the concept of the calendar for our civilized life, for without a calendar no country can get on with its day-to-day work.—Dr. K. D. Malaviya, Deputy Prime Minister of India, Delhi.

THE CONTROLLER'S INTEREST IN THE WORLD CALENDAR

By Thomas M. McDade

(Reprinted in part from *The Controller*, August 1955)

Thomas M. McDade graduated from the College of the City of New York, 1928, and received his Bachelor's and Master's degrees in law from St. John's University. He was with the FBI from 1934-38, first as an agent, later as a supervisor. Prior to joining the armed forces in 1942, he was associated with the law firm of Bigham, Englar, Jones & Houston. In 1946 he joined General Foods as accounting manager. He was promoted to assistant controller in 1950 and elected controller, 1953. He is a member of New York State Bar and of Controllers Institute of America.

Reform of the calendar is again in the news if recent articles in the Reader's Digest and many other periodicals are any indication. In addition, a proposal to reform the calendar is on the agenda of the Economic and Social Council of the United Nations. Consideration of this item, however, has been deferred until the spring of 1956.

The current movement for *The World Calendar* goes back about 50 years. In 1910 the International Chamber of Commerce began a movement for calendar reform. Subsequently the League of Nations took up the subject. The League considered 185 calendar reform plans and rejected all but two—*The World Calendar* with equal quarters and the 13-month calendar with equal months. In 1937, 14 nations voted for *The World Calendar* and none voted for the 13-month calendar. For all practical purposes, then, the 13-month calendar is dead. Businessmen, used to facing the world as it is, if they desire calendar reform, should push for

adoption of *The World Calendar*, regardless of which calendar they believe to be most perfect.

True, each controller, in his own realm, faces problems more serious and crying louder for solution than those created by our present calendar. A new calendar, therefore, cannot demand his attention because of any dramatic benefits his company will realize from its adoption.

Supporters of *The World Calendar* claim, however, that a more reasonable method of dividing the year into weeks, months and quarters will result in incalculable benefits to all institutions which deal with time and that the cumulative benefits will be measurable in a happier and more productive world.

MOST people see little that is wrong with the present calendar. There is, of course, the mild annoyance when a holiday falls in the middle

of the week or the real chagrin when lodge night falls on your wife's birthday.



Thomas M. McDade

But most people attribute these things to fate and not to a man-devised calendar. "*The fault, dear Brutus, is not in our stars, but in ourselves.*"

The trouble with time is that it is measured in three different ways. The day is the measure of the time it takes our planet, Earth, to turn once on its axis. The year is the measure of time it takes our planet, Earth, to revolve once around the sun. The lunar month, now less important, is the time it takes our moon to revolve around the Earth.

Unfortunately for the devisers of calendars, the world takes $365\frac{1}{4}$ days—less 11 minutes—to circumnavigate the sun. In accounting terminology it takes 365.242216 days. In accounting for this time, our present calendar produces the following effect:

- quarters and months end on any day of the week.
- quarters are unequal in length.
- days and dates never agree from year to year.
- holidays vary.
- years begin on different weekdays.

In addition (and only because Emperor Augustus stole a day from February to give his month, August, 31 days) the first half of the year, with 181 days, is three days shorter than the second half.

These awkward characteristics of our calendar arise from the fact that our

solar year contains 52 weeks and a day rather than a neat 52 weeks.

Our Calendar's History

Except for one change, our present calendar is the one which was decreed by Julius Caesar about 2000 years ago at a time when his word was law in the Western World. Caesar's calendar contained $365\frac{1}{4}$ days with the fractional days saved up and recognized every fourth "leap" year. So it was Caesar who gave us a calendar with months of 28, 29, 30 and 31 days and with a fractional number of weeks in the year.

Pope Gregory XIII in 1582 was advised that Caesar's calendar contained a slight error and that unless he took action, the first day of Spring—which is supposed to come on 21 March—would eventually come in December. To correct this intolerable situation the Pope decreed a correction of the calendar and a new method of computing leap years so that the error would not recur.

The authority of the Roman Catholic Church assured the immediate adoption of the Gregorian calendar in many countries. Great Britain and her American Colonies did not fall in line, however, until 1752. To correct the calendar, 11 days had to be dropped and this was done in spite of rioting and obstruction by some folk who were convinced that 11 days were being stolen from their lives. "*Give us back our days,*" they cried.

But how does all this affect our business and personal life?

The Calendar Today

At present there are 28 different forms a month can take depending upon the number of days in it and the day on

which it begins. For example, January 1947 had four Saturdays and four Sundays. January 1948 had five Saturdays and four Sundays, while in 1949 January had five Saturdays and five Sundays. This variance creates real problems for businessmen when they compare one month's results with the previous month or with last year.

Today when you compare one January's results with another you may have to know how many Saturdays and how many Sundays were in each and also on what day of the week New Year's Day fell.

Suppose your Board of Directors meets on the fourth Wednesday of every month. The date can range between the 22nd and the 28th of the month with all that that implies in accounting and other deadlines.

In planning operations and comparing results, the incidence of holidays plays an important role. Whether Christmas falls on a Wednesday or a Saturday makes a tremendous amount of difference to Macy's and Gimbel's. Whether July Fourth falls on a Monday or a Wednesday means much to Atlantic City and to Niagara Falls.

"Marooned" holidays are another bane of the businessman and the holidayer. Does anyone rejoice when Washington's Birthday falls on Wednesday? Of course not. Half the joy of the day is lost in regret that it does not provide a long week-end. When the holiday falls on a Tuesday, production schedules are often upset when workers rebel and make it a long, long week-end.

The effect on productivity is twofold. As we all know from observing ourselves and others, there is always a slight let-

down on Friday afternoon before a week-end and it usually takes a while to get moving again Monday morning—startup time so to speak.

How much worse it is when you have a marooned holiday. You have two let-downs and two startups and everyone is miserable.

The second effect of a marooned holiday is inherent in the complex nature of our industrial machine. In process manufacturing the plant is often geared to work 24 hours a day for five or six days with a scheduled shutdown on the week-end.

The cost of starting up and shutting down a great industrial plant or of paying premium wages to keep it operating are well known to production managers and controllers.

When manufacturing is on an assembly line the problem is hardly less serious. The time lost for machine adjustment and the inferior production resulting from absenteeism usually result in lower production and higher cost per unit.

Should a nation's holiday and its production of wealth both be marred because of a capricious calendar?

Recognizing that the present calendar creates difficulties in business and social life, you may wish to know what the alternatives are and what chance there is for a change in the calendar.

Alternative Plans

In the plan of the ingenious and simple 13-month calendar, every month begins on Sunday and ends on Saturday; each month has exactly four seven-day weeks—28 full days. The obvious advantages to business need not be labored here. It

is sufficient to note that hundreds of businesses now superimpose a 13-month business calendar on our present calendar in order to reap the benefits of uniform accounting periods.

Enthusiasts for the no-vote 13-month calendar plan have a very real consolation. With the adoption of The World Calendar they can still use a 13-month calendar for business purposes as they now do with the added advantages that the 13 months will fit exactly within The World Calendar and the year will always begin on a Sunday.

The World Calendar, like the 13-month calendar, recognizes that the cause of most of our calendar problems lies in the length of the solar year. It is about one and a quarter days longer than 52 weeks. The World Calendar disposes of the extra day and gives us a balanced calendar which will be the same every year.

The unique features of The World Calendar are apparent in the illustration [on the inside front cover of this *Journal*]. . . .

Hip-Hip-Holidays!

In achieving this happy result, The World Calendar incidentally gives us an extra holiday every year and two extra holidays on leap years because the only rational solution is to exclude all days over 364 from the normal year. This leaves 1.242216 days to dispose of. With The World Calendar a holiday is slipped between the end of the year and the beginning of the new year guaranteeing a three-day New Year's week-end every year.

This holiday, known as Worldsdays, "W" day, has no business significance.

Every fourth year a second W or

Leapyear Day would be inserted between the end of June and the beginning of July providing a four-day week-end if Independence Day is celebrated on 2 July.

While it has been suggested that these W days be dedicated to World peace and understanding, the decision for us to do this would rest with the United States Congress. Congress might decide to reserve them for some national purpose. Perhaps some controllers might denominate the day falling at the end of the year as "Inventory Day"!

Mervyn Jones—no controller—has a different idea. Writing in *The New Statesman and Nation*, he says:

"It was already an excellent idea to start the year on a Sunday. Many a Scot, who has dragged himself with throbbing head to his London office, would be thankful for this alone. But gratitude will change to enthusiasm when that Scot learns that the year is to end with an extracalendarical day—a nimble carefree day, a sprite of a day whereon no bills may mature and no rent may fall due. And, of course, it is not only Scots who will gather at those extracalendarical parties promised us by the brainwave of the genial Abbé Mastrofini. There will be no trouble with the Lord's Day Observance Society, for Worldsdays will not be a Sunday so much as a gloriously prolonged Saturday night. The whole proposal, if properly put across, has a superb appeal. There is a Rabelaisian grandeur of spirit about this cosmopolitan binge, these 36 hours of revelry resounding from pole to pole."

Marooned holidays are not automatically eliminated by The World Calendar but because all holidays are fixed on a particular date and day the problem can

be met by moving a holiday. The change need only be made once and the matter is settled forever.

Christmas under The World Calendar will fall on Monday every year giving most of us a three-day week-end. Labor Day, of course, remains on Monday, July Fourth will always fall on Wednesday—this holiday could be moved up to Monday, 2 July, which happens to be the date the Declaration of Independence was passed by Congress.* On leap years, the 3 July week-end would be four days long.

Washington's Birthday, Memorial Day, Columbus Day, and Thanksgiving are other holidays which should be moved to Mondays to give them the greatest recreational value and to make them more meaningful tributes to national heroes.

Working-Day Angles

The World Calendar, because it is perpetual or repetitive, offers other business advantages which are particularly evident to traffic managers, marketing men, transportation executives, and school administrators.

All train, plane, and bus schedules now must be changed every major holiday to accommodate passenger traffic. This also affects train freight schedules. With holidays fixed these transportation schedules would be fixed also. Changes would be necessary only as indicated by accumulated experience.

* John Adams, one of the authors, wrote to his wife on 3 July, 1776:

"Yesterday the greatest question was decided which ever was debated in America; . . . A resolution was passed that those United Colonies are . . . free and independent states. The second day of July, 1776, will be the most memorable epocha in the history of America . . . it will be celebrated by succeeding generations as the great anniversary festival."

In the same way, an advertising manager could plan a detailed media schedule one year and change it the following year only to improve it, not to adjust it to wandering holidays.

The World Calendar will mean a significant saving to advertising agencies. This is because newspapers are published by the date but the most important single factor of a newspaper ad, aside from its content, is the day of the week on which the advertisement appears. Each weekday has its own customers; food advertisements are considered most effective on Thursdays and Fridays, resort ads on Tuesdays and Sundays, real estate on Fridays and Sundays, and so on.

With The World Calendar, constant rechecking of day and date on insertion orders would no longer be necessary because a date would always fall on the same day of the week.

Schools and universities will benefit from The World Calendar. School normally begins after Labor Day which floats within the first week of September. The Christmas closing depends upon the day of the week 25 December falls.

School administrators each summer are hard pressed to devise a curriculum to accommodate a school year which has no fixed beginning and no established holidays and still get in the mandatory number of teaching days.

With a fixed calendar much time and money now devoted to this annual, unproductive chore will be released for a better purpose. School officials will be able to plan a course of study, set the opening and closing dates and allow for holidays. They will never have to change it because Labor Day comes late or because Christmas falls on a Wednesday.

SURVEY OF MEMBERS OF CONTROLLERS INSTITUTE ON THE PRESENT CALENDAR

In 1950, John M. Firestone of the Department of Economics of the College of the City of New York, acting as a research consultant to The World Calendar Association, conducted a survey of members of Controllers Institute to determine the nature and extent of the problems created by the present calendar from the viewpoint of the businessman and to find out whether the proposed calendar would, in their opinion, eliminate the difficulties.

SUMMARY OF RESPONSES

NUMBER ANSWERING "YES"
(based on 538 replies)

DIFFICULTIES CAUSED BY PRESENT CALENDAR	<i>Causes Difficulties in Scheduling Sales or Production</i>	<i>Causes Difficulties in Making Compari- sons with Past</i>	<i>Could be Alleviated by a Stabilized Calendar</i>
a. Variation in the number of weekdays per month	232	412	419
b. Variation in the length of the quarters	144	308	310
c. "Grasshopper" dates—never twice in succession on the same weekday	132	185	213
d. Variations from year to year of the day of the week on which a holiday occurs	196	284	315
e. "Marooned" days (i.e. Monday preceding a Tuesday holiday)	264	204	298
f. Variable wage costs for hourly workers because of shifting holidays—i.e., overtime rates	146	180	228
g. Variable wage costs for workers paid on a weekly or monthly basis—unequal number of working days per pay period	132	228	274
h. Salesmen's expenses when forced to "layover" because of a mid-week holiday	86	95	149
i. Cost involved in adjusting production schedules to mid-week holidays	201	114	212
j. Interruptions in the flow of subassemblies and parts from suppliers interfering with the plant production schedule because of calendar irregularities	98	46	101
k. Losses resulting from ill-timed advertising because of calendar variations	26	22	45
l. Compliance with deadline requirements in monthly reports because due date falls on a certain day of the week	171	214	324

Prospects for a Change

What are the prospects of adoption of The World Calendar? No single authority can decree a change in the calendar yet the aim is a common standard for the world. It should replace the Julian, Gregorian and the dozens of other calendars in use today.

A proposal to adopt The World Calendar is now before the United Nations. It is not expected that action will be taken in time to make The World Calendar effective in 1956—a convenient time because both The World Calendar and the current calendar begin on Sunday.

World Calendar advocates have 1961 as a target date as it is the next equally suitable year.

Opposition to The World Calendar is of two kinds. Certain religious groups, but none of the largest ones, believe that the exclusion of the odd days from the normal calendar year will upset the observance of the Sabbath because once each year, and twice in leap years, seven days will intervene between Sundays.

Religious groups supporting the change reply first, that the "extra" days outside the year can be used for religious purposes; and second (a Christian reply), that Jesus said the Sabbath was made for man and not man for the Sabbath.

The second kind of opposition, and the most effective, is inertia. Many people say "leave well enough alone" without ever considering whether the present cal-

endar is well enough. The attitude of our State Department is that it will do nothing until public opinion and the Congress express approval of The World Calendar.

Who are the backers of The World Calendar? First there is The World Calendar Association in the United States. This group, with offices at 630 Fifth Avenue, New York 20, N. Y., is a leader in the movement for the calendar change and will gladly send material on The World Calendar to those who request it.

Business support of The World Calendar has been expressed through numerous Chambers of Commerce; through the Consulting Management Engineers Association; through the Controllers Congress, National Retail Dry Goods Association, and through the American Institute of Accountants. Many scientific bodies support The World Calendar.

It is improbable, however, that the United States Government will support The World Calendar unless the business community itself recognizes its many advantages and presses hard for adoption.

The decision, therefore, is in your hands. To exercise a positive influence* you should study the merits of The World Calendar.

* Two Controls of Controllers Institute—Pittsburgh and Seattle—have endorsed The World Calendar as a means "to meet more adequately the requirements of the modern world, particularly in facilitating simpler and more accurate procedures in management planning in accounting."

Let's Take A Look At



Wandering holidays, unequal "quarters" and other calendar difficulties take a toll in money, time and effort every year.

... our confused calendar

(From Thilco News, published by the Thilmany Pulp & Paper Company, Kaukauna, Wisconsin)

LIKE to have all your holidays come on Mondays? The answer to that would probably be an overwhelming "yes," with the answering chorus thinking of all the possibilities of the long week-end—extended trips, visits, gardening, and so on. Beyond that, many might think of the advantage to industry gained by avoiding one-day shutdowns in the middle of the week, with all the costs of stopping and starting up production in a big plant, as well as attendant scheduling troubles.

In fact, it's hard to see who wouldn't gain from the adoption of a Monday holiday plan. Resistance to such proposals, which have often been made to state legislatures (which actually proclaim these holidays), seems to come only from our human reluctance to change a familiar pattern.

Our forefathers were apparently not as convinced of the importance of a holiday date as we are. We faithfully observe 4 July as Independence Day, in the fond belief that on that date the Declaration of Independence was signed. It wasn't. The Declaration was adopted on 2 July, and only one member of the Congress signed it on that day. The 2d of July being a Saturday, the event was, sensibly enough, celebrated on the following Monday, 4 July. Following the reasoning of that time, we should have been celebrating on the first Monday in July all along.

Our resistance to such a minor change in the scheme of things as the Monday holiday plan may crumble in the face of a still more far-reaching proposal. Nothing less than a face-lifting job on the Gregorian calendar has long been urged by many people, and is even now being considered by the United Nations. One of the features of the proposed World Calendar is that internationally-observed holidays would fall on Mondays, or special end-of-week days. Many governments are already on record as approving the new calendar, and religious leaders have indicated that there is

no dogmatic objection to the revision, since it is the civil calendar only that is being reformed.

Agitation to change the familiar shape of the calendar may strike us as being foolish, if we believe that the calendar actually represents the unchangeable flow of time. In fact, however, it is just an instrument, a tool devised by man to enable him to keep track of events. The one we're using today wasn't even designed until the 1580's, and has been in wide use for only a couple of centuries. The Pilgrim fathers, for instance, reckoned time in accordance with the old Julian calendar, for England didn't accept the reformed version until 1752.

The reform introduced by Pope Gregory XIII in the late 16th century was actually a correction of an error made by Julius Caesar's Greek mathematicians when they set up the calendar in 46 B.C. The annual error was a matter of only 11 minutes, but in the course of centuries, this resulted in the very important date of the spring equinox, when the earth is closest to the sun, being shown on the calendars pretty much out of place. In Pope Gregory's time, the spring equinox was occurring on 10 March, rather than 21 March, as the calendar proclaimed. Since the date of the Easter celebration was linked to the date of the equinox, this made things rather awkward.

The remedy was to drop 10 days out of the current year, and drop one leap-year every four centuries.* This was standard practice in Catholic countries in 1582, but as noted above, other countries resisted the change for a long time. Russia and Greece held out until early in this century.

The history of calendar-making is a confusing subject; many different calendars are still in use today. None of them actually reflects the modern need for a stable calendar, with months as equal in length as it's possible to get them, and without so-called "wandering holidays." But as long as we remember that the calendar has been changed many times before, and is actually only a device for measurement, we shouldn't have too much trouble accepting future changes. It's only been in the last couple of hundred years that 1 January has been taken as the beginning of the year, for instance! . . .

A glance at the calendar shown [on the inside front cover of this *Journal*] will quickly reveal all the changes, and also show that business quarters will always be of equal length, and that the calendar does not change from year to year. Plans, both personal and business, can be confidently made far in advance, with no possibility of a forgotten holiday suddenly popping up to throw things out of kilter.

Opposition? Just from our reluctance to change things. Nothing else seems to bar the way. One thing we know for sure—the calendar's been through worse than the proposed new changes, and most of us still claim to know what day it is.

**Editor's Note:* The new leap-year rule, skillfully formulated by the Pope's advisers, related only to century years. Those which were divisible by 400 were to be leap years; all the others were to be ordinary years, such as 1700, 1800, 1900. The years 1600 and 2000 are leap years. Outside of centurial years, all the other years keep to the simple four-year rule as prescribed by Caesar. Thus three leap years are dropped out of each 400 years.



Wednesday, March 1, 1950
 Thursday, March 1, 1951
 Saturday, March 1, 1952
 Sunday, March 1, 1953
 Monday, March 1, 1954
 Tuesday, March 1, 1955
 Thursday, March 1, 1956
 Friday, March 1, 1957

OUR COCKEYED CALENDAR

By Willy Ley

The following article is reprinted from Galaxy Science Fiction Magazine, copyright 1955, as condensed by Science Digest March 1955. The author, Willy Ley, popularizer of science, has a triple career as writer, lecturer, and technical adviser for science-based TV programs.

THE calendar is not perfect—a fact I encounter myself roughly once a day. Somebody wants to know whether I'd be available for a lecture on, say, 25 January or whether I'd prefer 28 January.

First thing I have to do is see if one of these days is a Monday; for family reasons, Mondays are inconvenient to me. Or a transportation schedule may hinge on the problem of whether there will be four or five Sundays in July of this year. (Don't look it up; try to guess.) I am also slightly tired of the routine—so frequently needed in historical research—of figuring out whether 1 May 1898 was a Sunday. (It was.) And wouldn't it be nice if a person's birthday or wedding anniversary came on the same day of the week each year?

The roots of the trouble are two simple astronomical facts. One is that the earth needs 365 days, 5 hours, 48 minutes and 46 seconds to go around the sun once. That is one of the difficulties: the year does not consist of a number of whole days. The other difficulty is that we have a moon.

I admit at the outset that it is a very pretty moon. It is one of the biggest in the solar system and its existence helped to get several sciences and assorted interesting and exasperating superstitions going. It is a challenge to space travel and all that.

The trouble is that primitive peoples, at a time when artificial clocks were still to be invented, used it as a clock. The waxing and waning of the moon was easily visible. Time-reckoning based it-

self almost automatically on the lunar phases.

But the natural rhythm of life is the daily change from light to darkness and back to light again, based on the apparent movement of the sun. The moon, large and luminous and conspicuous as it is, could not do away with the day. Time reckoning, as a consequence, became a mixture of solar and lunar phenomena.

A messenger was to return either when the shadows lengthened, or else after the sun had taken two baths in the ocean. That was solar. But if it was a long trip, the messenger might not be back until after the moon had twice renewed itself. That, of course, was lunar. If the trip was really long, it might happen that the voyagers would not return until two winters had gone by—solar reckoning again.

As long as you could be lavish with a few days, all this did not matter. The difficulties began when people tried to pin down time a little more accurately, such as for the purpose of a festival. Just how many days are there between two "moons"? Answer (modern): 29.5305879. And how many "moons" between two winters? A disturbing 2.3682668.

Now you either know these unpleasant figures—or you don't, and believe that you are dealing with $29\frac{1}{2}$ days and $12\frac{1}{2}$ moons." If you believe the latter, your calendar will get out of order rapidly.

If you do know the figures, you realize that these things do not mesh and you struggle for a compromise which somehow fits the days, the seasons and the phases of the moon together.

None of the many attempts made at various times by various people was ever

completely successful; none can be successful since the actual units simply can't be meshed—they are not commensurable. However, the job can be simplified and the result improved if you throw out one of the incommensurable units, namely, the phases of the moon.

This, in fact, was done in the oldest calendar we know of, the Egyptian calendar. Life in Egypt was based on the flooding of the Nile, an annual event, and their calendar had three seasons, named Flood Time, Seed Time, and Harvest Time.

Each season was subdivided into 4 months, so that a full year contained 12 months. Each Egyptian month contained 30 days and began with a festival.

But this accounted for only 360 days. As for the remaining 5 days, the Egyptians decided that they were not worth much trouble, so they bunched them up at the end of the year and seem to have treated them as a holiday week. Simple, eh?

In 138 B.C., King Ptolemy Euergetes (not *the* Ptolemy, Claudius Ptolemaeus, the famous astronomer) pointed out that, every 4 years, 6 days should be added instead of 5, but his suggestion didn't find any friends. Some 200 years later, when Julius Caesar had decreed a calendar for the Roman Empire, the Egyptian officials, knowing what was good for them, finally consented to an extra day every 4 years.

With all its shortcomings, the Egyptian calendar was the first "real" calendar, if that term is taken to mean a fixed scheme, a schedule, a timetable upon which to base operations.

By contrast, the Babylonian calendar, though probably older, was not "real."

It had a year of 12 months, based on actual observation of the moon. A 13th month was added whenever it became necessary to get the lunar phases and the seasons together again.

Before Caesar issued his calendar decree in 46 B.C., the Romans had struggled along with a calendar of 355 days. Even that, believe it or not, had been an improvement.

The original Roman calendar had consisted of *ten* lunar months, beginning the year with March and ending in December. The intervening period of about 60 days was simply neglected—why bother counting winter months? (The Vikings are said to have done the same, with a little more justification as to climate, I should think.)

Then the Romans added January and February at the end of the year, but this came out with a total of 354 days. Because even numbers were unlucky to the Romans, a 355th day was tacked on.

Of course, this still did not make the seasons come out evenly, so, every two years, an extra month was added. Its name was *Mercedonius*, which can best be translated as “extra pay” (for the legions) and to show that this was not a normal month, *Extra Pay* began after 23 February, running for 22 or 23 days, after which the last week of February finished up the year.

Around 300 B.C., one Cneius Flavius changed things around a little more, making all months uneven so that they should be lucky, taking the needed days away from February to give it an even number of days (ours still remains 28) because the last month of the year should be unlucky.

So the year began with March of 31

days, followed by April with 29 days, May again had 31 and June 29, Quintilis (the 5th month) again 31, Sextilis (the 6th) 29, September 29, October 31, November, December and January 29 each and the 12th month, February, the same unlucky 28.

Every second year, of course, you had *Mercedonius* interrupting February. Four years in succession, then, had 355, 378, 355 and 377 days, which made every year one day too long.

In the middle of all this, they shifted the beginning of the year to 1 January since this was the day newly elected consuls took office. The result is that October still means “the eighth” month, but it is actually the tenth, November, the “ninth,” is the eleventh and December the “tenth,” is, of course, the twelfth.

How’s that for sheer infuriating mix-up?

Caesar, having been elected the high priest of Rome in 63 B.C., disliked a calendar in which two successive years could not be compared, either in military operations or in tax collections. His model was the Egyptian calendar, with the “added days” evenly distributed throughout the year and an extra day every fourth year.

Caesar, or maybe his advisers, thought that the solar year was 365 days and 6 hours, making it about $11\frac{1}{4}$ minutes too long, which is a lot.

But the introduction of the new calendar was not enough. The vernal equinox, the day in spring when night and day are of equal length, had meanwhile strayed some 90 days from the date where it belonged. So Caesar took the year we now call 46 B.C. to begin his correction of the calendar.

It being a "long" year anyway, containing a 23-day Mercedonius, Caesar added two more "Decembers," one of 33 and one of 34 days, stretching the year to 445 days. His enemies called it the "Year of Confusion," to which Caesar's friends replied that it was the "Last Year of Confusion."

When it was all over, the Senate decided to honor Julius by renaming the month of his birth, Quintilis, after him—our July. Later, Sextilis was named after Caesar's successor—Augustus. Caesar also added the leap year.

As time went by, it turned out that the "Julian Year" itself did not fit precisely. Remember that it was $11\frac{1}{4}$ minutes too long. That does not sound like much, but in the course of ten centuries, the error accumulated to a very noticeable eight days. By the year 1580, the vernal equinox, put by Caesar on 25 March, had drifted to 11 March. If this was not corrected somehow, Easter would land in mid-winter and all other holidays would be dislocated, too. It was clearly time for another revision.

Pope Gregory XIII, after most careful consideration, cleared the matter up by issuing a papal bull which decreed that the day following 4 October 1582 was to be called 15 October. This change placed the vernal equinox on 21 March.

To avoid a recurrence of the drifting of the vernal equinox, the leap-year rule was modified. Caesar had decreed that every fourth year was a leap year. The papal bull added that full centuries could not be leap years, unless they were divisible by 400. The year 1600, then, was a leap year and the year 2000 will be one; but the years 1700, 1800 and 1900 were not leap years.

This correction of the leap-year rule, coupled with the elimination of ten days in 1582, constitutes what is now called the Gregorian calendar. Its average year works out as being 26 seconds longer than is accurate, but this error is so small that more than 33 centuries have to pass before a single day will have to be dropped.

The revision of the calendar was adopted at once in Italy, France, Spain, Portugal and Poland. Holland, Flanders and the Catholic sections of Germany followed a year later. Protestant Germany refused and so did England, because the rule came from the Pope. Hungary followed suit in 1587. In 1700, Denmark and Protestant Germany turned "Gregorian."

When England took the plunge in 1752, the discrepancy had grown into 11 days. Simultaneously, New Year's Day was changed from 25 March to 1 January. There was rioting and there were stories that cattle still kneeled on "true Christmas," but refused to kneel on "Papal Christmas."

England had no monopoly on calendar riots. Poland had experienced them and so had some German states. People refused "to give up" 11 days of their lives. Of course the longer a country waited, the more days had to be dropped. Japan experienced that in 1873, Albania in 1912 and Rumania in 1924. The most sturdy opposition was found in Russia.

For many centuries, Russia had lacked a calendar completely, the peasants getting along with reference to the moon and to seasons, the educated people using a Western calendar while in Western countries. It needed the "October Revolution" (which took place on 7 Novem-

ber 1917) to bring about a revision. After a short period the official Russian calendar jumped 13 days.*

A calendar like the Gregorian, which will not drift by more than a single day in 3,300 years, is a remarkable accomplishment and nobody in his right mind ever suggested doing anything further to its main unit, the year. But there have been suggestions of rearranging the smaller units inside the year.

The main problem is posed by the week. A normal year has 52 weeks and one extra day; a leap year has 52 weeks and two extra days. As early as 1834, an Italian priest, the Abbé Marco Mastrofini, suggested that this extra day should simply be "removed" from the year so that the calendar year would consist of a year (of 364 days) *and* a day—reminiscent of the British guinea, which is a pound *and* a shilling.

If we take one "extra day" at the end of each year (two in a leap year), every year would begin with a Sunday and consequently every date would always fall on the same weekday.

Father Mastrofini's suggestion was taken up by the French Astronomical Society in 1887, but in the meantime, a French philosopher, Auguste Comte, had confused the issue. In 1849, he published his plan for a 13-month calendar. Each month was to have 28 days (the nearest thing to one lunation) and there were to be one (or two) blank days at the end of the year. It was an attempt to combine solar and lunar elements, but apparently Comte failed to realize that even

if 13 months of 28 days were 13 "moons," the blank days would throw the calendar out of gear again.

Although rejected by almost everybody, the Comte calendar retained a small fellowship, presumably composed of people who wanted to prove that they were not afraid of the figure 13. Each month had a new name.

After the First World War, the proposal was revived under the sponsorship of George Eastman and dubbed the "businessman's calendar." Of course Eastman did not want Comte's fancy names; he needed only a single new name, one for the 13th month. Mercedonius would have been especially suited for a businessman's calendar, but the most serious contenders were Sol and Liberty. To most people, however, it was still a 13th month and they liked it even less when, with the fixed weekday dates, it turned out that it produced a Friday the Thirteenth 13 times a year.

What was more important was that the thing simply was not practical. A 13-month calendar, no matter how well advertised, is *not* a businessman's calendar. One large firm is said to have used it internally for an experiment, with complete chaos resulting. The businessman wants to compare the first week of March in two years, or the first fall month of two years, and he is used to quarterly statements and semi-annual inventories or accountings. You cannot do that with a 13-month calendar unless you tear a month apart.

The revision now under discussion—it got as far as the United Nations—is the so-called World Calendar, which goes back to Mastrofini's simple proposal, improved by an adjustment of the months.

* *Editor's Note:* Before the "October Revolution," the Russians used the Julian calendar. See Achelis *Of Time and the Calendar* (Hermitage House, 1955), pp. 96-99.

MONDAY HOLIDAYS—BUT

THE article by Frank Sullivan, "The Unlost Week-End—Three Days," which appeared in *The New York Times Magazine* 29 May,* is in line with progress, a step in the right direction, but it is not the week-end solution. The Planners of the National Association of Travel Organizations would exchange one obstacle for another equally formidable. For the inconvenience of shifting weekdays the Planners would substitute the confusion of shifting month-dates. In our present changeable calendar we cannot have both fixed days and fixed dates—we are simply robbing Peter to pay Paul.

Memorial Day would always come on the last Monday in May, according to the National Association, but this holiday would not only grasshop between 23 and 30 May but would wander between a fourth and a fifth Monday; Independence Day on the first Monday in July would gravitate among seven days, the 1st and the 7th; likewise Labor Day on the first Monday in September would come between the 1st and the 7th; while Thanksgiving day on the fourth Monday in November would shift between the 16th and 23rd, happily avoiding, however, a fifth Monday. Dates would roam about in a most bewildering manner from year to year, resulting in constant guesswork and endless inconvenience.

It is true that our British cousins across the Atlantic observe their national holidays on Mondays as do our Canadian friends to the North. But why take those half measures? Why not first adopt a permanent calendar, such as *The World Calendar*, in which Monday holidays would always agree with their respective dates? Think how delightful it would be to observe Christmas always on Monday, 25 December, with our gift-buying finished by Saturday evening the 23rd. Christmas Eve Sunday could then be devoted to loving and religious preparation for the glorious festive day on Monday. Every year would begin on its fixed date 1 January on the logical first day of the week Sunday!

Corresponding days and dates can only be obtained in a perpetual calendar wherein Memorial Day will always be the last Monday in May, the 27th; Independence Day, the first Monday in July, the 2nd, the date when the Declaration of Independence was introduced in the Federal Congress and which John Adams predicted would be a great national holiday; Labor Day, the first Monday in September, the 4th; and Thanksgiving on either the third or fourth Mondays, November, the 20th or 27th.

As for the President's Day, the Planners of the National Association of Travel Organizations would have us place it on the third Monday in February, between the 14th and 21st. But why such an arbitrary date with no association connected with

*Mr. Sullivan discussed the proposal to place all major holidays on Mondays, a proposal advocated by the National Association of Travel Organizations.

it? What is wrong with the second Monday in February, the 13th, as it would be in The World Calendar? The Saturday of that week-end would commemorate Washington's actual birth-date, the 11th, before it was advanced eleven days to the 22nd when England and her then American colonies replaced the Julian with the Gregorian calendar.

The next day Sunday, 12 February, is Lincoln's birthday and, as is the custom, it would be celebrated on Monday the 13th. By honoring these two distinguished presidents—George Washington, father of the country, and Abraham Lincoln, preserver of the Union—we would give respect and esteem to the office of the presidency.

Of course, progress demands giving up something for something better. However, as for the less forward-looking people, change from the familiar and known to the new and strange makes them apprehensive and fearful.

The change from the leisurely horse and buggy to the rapid mechanical automobile was a courageous venture, but opposition was expressed by the more rigidly minded. To give up the familiar ticking of the clock for a noiseless electric device was a complete reversal of what we had known. Yet there is no one living today who would wish to return to the old ways.

The Monday holiday movement cannot well be separated from calendar reform. The acceptance and operation of The World Calendar will unfold many unknown possibilities and advantages. When our forefathers conceived and adopted Standard Time they could not have foreseen the radio and the airplane, the scheduling and programming of which have been made easy because of Standard Time encircling our globe. Likewise the sponsors and advocates of The World Calendar cannot realize now the future which may well revitalize and improve many aspects of life because of one world calendar in daily use throughout our globe.

The purpose of modern calendar reform and Monday holidays is to establish out of our present irrational and shifting calendar a regularized and perpetual system in which all the various time-units annually agree and the calendar becomes a united system of time.

The subject of calendar reform, including fixed days, fixed dates and comparable years, is now under consideration by the United Nations. Inasmuch as the subject is international in scope, it should logically come before such an international body for study, deliberation and recommendation.

THE WORLD CALENDAR EXHIBIT MOVES TO FELS FROM HAYDEN PLANETARIUM

THE World Calendar Exhibit, for the past two years at the Hayden Planetarium, New York, where it was viewed by over an estimated million visitors, is now on exhibit at the Fels Planetarium, Philadelphia.

BENEFITS TO AGRICULTURE

By A. J. Hills

*Assistant Director General, The World Calendar Association, International
(From the Agricultural Institute Review, Ottawa, Canada)*

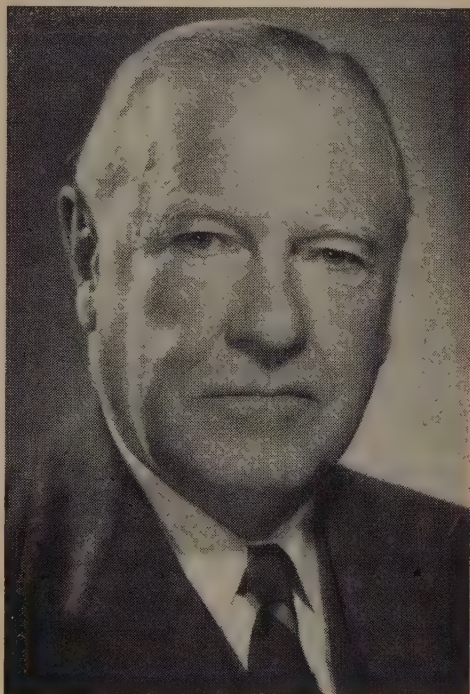
CONSIDERATION of this subject is timely, because of the recent action of the Government of India in requesting that the plan for reform of The World Calendar be included in the agenda of the recent meeting of the Economic and Social Council of the United Nations (ECOSOC).

India's action had unusual significance, and the resultant discussion aroused widespread interest in the subject of calendar reform.

The fact—as Prime Minister Nehru stated in his message to the first meeting of India's Calendar Reform Committee—that there are in use at present in India 30 different calendars is an appeal to which there can be only one satisfactory answer. This must surely be the recommendation of a convention to be implemented by U.N. members which will have a unifying effect on the numerous factions in India, and bring together, in a measure for relief, all the countries now suffering from calendar inadequacy. . . .

It is certain that, if other nations of the world were in the position of India, having to decide on a new calendar to meet the needs of today, and to apply to differing constituents, there would be no doubt as to which calendar would be preferred.

It is surely time to recognize that the present calendar "established in ignorant



A. J. Hills

times, is perpetuated in enlightened ones only because it exists.”*

It is a certainty that agriculturalists were the first to require a more reliable guide than the occurrence of meteorological phenomena provided. This led to the use of astronomical observations.

Sir Harold Spencer Jones, Britain's Astronomer Royal, is a member of the

* A phrase from Voltaire.

Council of the British Section of The World Calendar Association. In an address in New York, on the need for calendar revision, he stated:

"Nature provides us with three natural periods of time, the day, the month and the year, which depend respectively on the Earth, the Moon and the Sun. These three periods are not commensurable with each other, and that was why the early attempts to provide a calendar proved to be unsatisfactory, and why in the course of centuries so many different calendars have been devised."

After years of trying to solve the problem of how to combine the lunar months into years, the ancient Egyptians adopted a stellar calendar, based on the annual reappearance of the star Sirius; this event occurred almost simultaneously with the rising of the Nile, on which the agricultural life of the community depended. This was a decided advance in calendar-making—a forerunner of a still better calendar. . . .

In 1930 The World Calendar Association was formed to advance the 12-months equal-quarters plan which had been developed by study in Switzerland from the Armelin proposal. . . .

While World War II interrupted some of its activities, The World Calendar Association continued to expound the advantages of its 12-months equal-quarters plan.

In 1947 the Peruvian delegate to the Economic and Social Council of the United Nations proposed consideration of The World Calendar. The motion was seconded by Norway and supported by China.

The Secretary-General was instructed to prepare documentation. The report

was favorable, stating that the reform submitted "is the plan which has received the most favourable comments."

The Council, however, pressed to deal with problems arising out of the War postponed further consideration.

In 1949, The World Calendar's plan of calendar reform was placed on the provisional agenda of the United Nations General Assembly by the Republic of Panama. The item, on a tie-vote, was postponed on the grounds of a crowded agenda. Canada was one of the four nations voting for retention of the item on the agenda.

The World Calendar is the only survivor of hundreds of plans submitted to the League of Nations, and is now recognized as the only one worthy of consideration for general adoption.

The World Calendar has been endorsed by scientific, commercial, industrial, economic, educational and social organizations, by labor unions, employers' associations and by religious bodies. The list includes an enthusiastic endorsement by the American Society of Agricultural Engineers. . . .

That an improved calendar would be of special advantage to agriculture has been stressed by a number of authorities who have also pointed out how agriculturalists are handicapped by the deficiencies of the Gregorian calendar.

Speaking from an agricultural point of view the late Louis J. Taber, Master of The National Grange of the United States, is reported as stating, in the *Journal of Calendar Reform*: "Time and the measurement of time have always been important to the farmer. From the beginnings of agriculture, thousands of years ago and up until the present day, he has

been a watcher of the seasons, a reader of signs that would tell him what day was propitious for sowing, what for reaping."

Among references to primitive calendar efforts on this continent, Mr. Taber mentioned: "The Canadian tribes named the months 'Wild Goose Moon,' 'Frost Moon,' 'Strawberry Moon,' 'Red Raspberry Moon' and 'Huckleberry Moon.'" Continuing, he said: "Wherever man put his hand to the plow or tossed seed into the earth, you will find [such] names of the months, familiar and useful to farmers."

Mr. Taber stated that, while there have been thousands of calendars in the course of history, treasured and used by the farmer to guide him in his seasonal occupations, he had not found one wholly satisfied with the existing method of calculating the seasons.

"Long ago," he pointed out, "progressive farmers quit selecting dates for planting or harvesting by the light of the moon or the size of oak leaves, or similar methods. The coming of science has affected rural problems and made the farmer more of a business man than ever before.

"Proper measuring of time, a calendar that is as exact as modern science, will help the farmers of the future as much as it will the accountants, the statisticians or the business man."

Mr. Taber instances, "March 21 of one year is never precisely the same as the next [an example of how the present-day calendar fails the farmer]. In a statistical job, such as the farmer does when he attempts to figure results over a five-

year period, the discrepancies produced by an irregular calendar are annoying, fault-creating."

Mr. Taber's statement that an exact calendar will help the farmer of the future suggests a quotation from *Glimpses of World History* by the man who is now Prime Minister of India. (Mr. Nehru's book was published eight years before India's independence.)

"The past brings us many gifts: indeed, all that we have today of culture, civilization, science or knowledge of some aspects of the truth, is a gift of the distant or recent past to us. It is right that we acknowledge our obligation to the past. But the past does not exhaust our duty or obligation. We owe a duty to the future also, and perhaps that obligation is even greater than the one we owe to the past. For the past is passed and done with, we cannot change it; the future is yet to come, and perhaps we may be able to shape it a little. . . ."

A number of authorities on agriculture have stressed the needs for calendar revision. Professor E. R. Gross, of Rutgers, for instance, after pointing out glaring defects in the present calendar, added that Agriculture today is big business:

"Farmers must plan their work with care and with thought far in advance . . . with days and dates constantly changing, comparison [in the present calendar] is difficult if not impossible."

From all this, it is felt that agriculturalists may well get behind the movement for adoption of the 12-months, equal-quarters plan of calendar revision embodied in *The World Calendar*.

That 'Backward Nation' List

Norman (Oklahoma) Transcript

WE like to think of the United States as the most progressive and farsighted nation in the world, the leader in all things that are good for mankind.

That viewpoint suffered a severe jolt recently when the State Department decided that the proposal before the United Nations to modernize our calendar should not even be given further study.

By every test that can be applied—except that of superstition by small groups which accept the Gregorian calendar with their own special interpretations—The World Calendar would bring order out of chaos in the all-important subject of measuring time.

A number of the nations holding membership in the United Nations have given unqualified endorsement to the plan. A long list of business and professional organizations and thousands of religious leaders have placed their seal of approval on it.

And now the spokesman for the great United States comes through with this surprising comment:

"The United States protested today the United Nations should be able to find better things to do than tinker with the calendar."

There's a reminder in this course of action that Russia was something more than three centuries in making up her mind to go along with the Gregorian calendar following its adoption in 1582.

The proposal now before the United Nations, incidentally, was sponsored by India. Our gratuitous insult therefore was to India and to the many other nations back of The World Calendar.

Secretary Dulles—or whoever it was that wrote the statement on this matter—seems to be asking for a new classification of what once was referred to as "the backward nations."

Surely this is not typical of the vision of our State Department with respect to other world problems.

An End to Calendar Chaos

St. Petersburg (Fla.) Times

A RAILROAD engineer wouldn't try to time his train with a 59-cent watch—yet strangely enough, that is exactly what man is doing in running the 1955-model world according to our present calendar.

Like a runaway freight train, the old calendar has been slowing down and fouling up the world's business for years now.

This 365-day monkey wrench makes for all kinds of headaches: "Timetable" mixups in business, schools, sales, paychecks, and world statistics. Recording and planning problems. Productivity loses from mid-week shutdowns. Grasshopper days such as Labor Day, which leapfrogs between 1 and 7 September.

It is obvious that a well-ordered world needs a well-ordered calendar, not a chopped-up jumble of lopsided months.

Economic pressure for standardization increasingly urges adoption of the answer to all this—a World Calendar, containing four equal quarters and the 12 present months balanced by the observance of a world holiday at the end of each year.

What has held up the change? Apathy and timidity. What little opposition there is "comes from extremely orthodox groups... a very small part of the population of the world" according to a report by Trygve Lie in a United Nations document.

Today's wasteful, inefficient calendar may be on its way out. The world already shares the same sun, moon and globe. Let us hope that it will begin to count the days in a manner benefiting all before too long.

In this age of rockets and supersonic speed and other scientific triumphs, it would be a victory for the world to revise a calendar system that dates back to the ox-cart.—*Stamford (Conn.) Advocate.*

Agitation for Monday holidays in several states will stimulate the whole program of The World Calendar.—*International Falls (Minn.) Journal.*

NOTES ON ANCIENT CALENDARS

By Kingsland Camp

Mr. Camp, a Fellow of the Society of Actuaries, has in his leisure time devised a "New World Planisphere," that shows all the principal star constellations with a minimum of distortion, and that incorporates The World Calendar in order to introduce it to a wider public. In the following article he reviews the scheme of time reckoning used by the ancient Hebrews until the days of Kings Saul and David and Solomon.

THE United Nations now has before it the subject of calendar reform. Of the plans submitted, it will almost inevitably approve The World Calendar, proposed by the Association of that name, as being the least disturbing plan, with most advantages and fewest defects. Two principal misconceptions underlie most of the opposition, which is vociferous altogether out of proportion to the number of its really convinced members.

One misconception is the notion that any feature whatever of our present calendar is an unchanged survival from the beginning of recorded time; the other, that it is possible to have a civil calendar that is democratically fair to all people's religions but nevertheless "harmonizes," in a particularly stubbornly defended point, with what is claimed to have always been the religious calendar of one or two groups. A review of the historical facts, culled from several studies in the *Journal of Calendar Reform* and elsewhere, will be enlightening.

Our seven-day week is an altered survival from a very ancient manner of time-reckoning that was used for cen-

turies in Assyria and Palestine, beginning at least as long ago as around 2000 B.C. That calendar, as it may well be called, comprised principally seven consecutive periods of seven seven-day weeks, each period being rounded off by means of a double Sabbath into a fifty-day unit that was later called in Greek a "pentecontad," but in the Near East at the time was called a "seventh" of a year. This expression seems loose to us; seven fifty-day periods do not total to the $365\frac{1}{4}$ days of a solar year, but they did comprise the entire active duration of the year as they lived it, for the short remaining interval was devoted to a Sabbath-period of rest and religious celebration that lasted until grain was ripe for harvest (in that region, some time in April). Thereupon the "day of seizing the sickle" to reap that harvest inaugurated the first pentecontad or "seventh" of the new year. As weather conditions varied this date somewhat, the final Sabbath-period was not always either 15 or 16 days as our time-reckoning would lead us to expect. However, the simplicity and flexibility of the entire arrangement eminently suited the requirements of the primitive agricultural communities that

developed it before they knew the precise length of the year, and not impossibly before most such communities were well accustomed to arithmetic beyond the number of fingers on two hands. Note how easy it must have been to manage this practical and flexible calendar without using any written or spoken numeral beyond seven, for they did not need to determine the length of the final Sabbath-period by counting its days, at least not in the earliest times.

Scholars have amassed considerable evidence on this subject, the oldest items being from cuneiform records on clay tablets dating from before 2000 B.C., which was about the time that Abraham left "Ur of the Chaldees," a city in south Babylonia. But most of the evidence is from various Hebrew sources, the earliest of them in the Biblical book of Leviticus (23:15-16, "count from the morrow after the sabbath . . . fifty days"). There are partisans who refuse to believe that this means the kind of fifty-day unit described above, but open-minded scholars, noting the ritual described in preceding verses, are convinced that it must refer to the initial or harvest "seventh" of the new year. Passages in the Talmud, in certain Apocrypha, in the works of the philosopher Philo Alexandrinus and the historian Josephus—all Jewish sources—bear witness to this "pentecontad calendar," as students of the subject call it.

As a fact of history, that calendar is better established than the details of how the "unbroken succession" of seven-day weeks ever began. The available evidence does clearly show that that succession must have begun later than the seventh pre-Christian century and earlier than the second when (according to the re-

searches of Drs. Hildegard and Julius Lewy, two recognized Jewish scholars) there was still some controversy over its propriety. Possibly it was during the Babylonian captivity, which took place between those centuries, that the faithful remnant of the Jewish people instituted the unbroken succession of weeks and willingly submitted to other severer differences from their Babylonian captors, in order to preserve their identity as a chosen people in the midst of the oppressive and all-pervading idolatry and immorality around them. Much as we must honor those forebears of the present Jewish people for their difficult choice and for preserving unsullied their worship of the one true God, the record convincingly shows that they did consent to a change and also that no ancient people can claim an unbroken succession of seven-day weeks through all its history.

Additional items of interest:

(1) A few scattered Jewish communities outside of Palestine, who thus escaped being carried into captivity in Babylon, continued to use at least something of the old pentecontad calendar even into the fourth century of the Christian era, as attested by the church father Epiphanius.

(2) The ancient Assyrians and Hebrews both reckoned years in units of seven and fifty, thus curiously paralleling the weeks and fifty-day units within the years: the Hebrew record of this is in the twenty-fifth chapter of Leviticus, which prescribes the fifth year as a "jubilee."

(3) The fifty-day Pentecost period of the present Christian calendar from Easter to Whitsunday inclusive (as well as the fifty Sefira-days of the Jewish

calendar from the Passover to the feast of Shabuoth inclusive) is a survival from the opening fifty-day unit of the original Assyrian and Hebrew calendar, but adjusted from it to suit the phases of the moon, which was much more important to the ancients than to us.

(4) Indeed most ancient peoples were more meticulous about reckoning the time to dates of the full moon than they were about the exact length of the solar year; their high festivals took place at or close to the full moon, affording convenient extra hours of light to pilgrims traveling from a distance. Thus, since there is not an exact number of lunar months in a solar year, the dates of some festivals (just as with Passover and Easter today) varied from year to year according to the solar calendar. We consider such "wandering dates" an inconvenience: but in olden times they regarded the arrangement very differently, even as something sacred, despite its practical origin.

Except for human motives and failings and the spiritual strength that copes with

them, the most inspired prophet or law-giver cannot foresee conditions of a thousand years beyond. Utterly unaware of our earth's shape and motions, how could his legislation or prophecies prescribe timekeeping or traffic rules for a generation that can circumnavigate the globe?—or that can arrange when crossing the International Date Line either to miss a Sabbath or to spend a double one depending on the direction of travel? Indeed, how can he prevent his own people from making changes? By Exodus 12:2 the month following the Passover (always celebrated in the spring) was to be the first of the year; the present Jewish people begin their year in our month of September.

The sensible and really reverent attitude is the truly ancient one: to accept, while we have life, God's gift of Time; to measure it and to spend it, for everyday purposes and in dealing with others, in the manner most satisfying for such civil affairs; and to let each man observe his own religious rites in his own way.

OBITUARY NOTE

LIMA, Peru.—The death of Señor Don Luis Montero y Tirado removes from The World Calendar Association, International, a loyal friend and advocate. His interest in The World Calendar was aroused through his good friend Dr. Ismael Gajardo Reyes, an eminent scientist of Chile, who in 1934 inaugurated the Latin-American Committee for calendar Reform.

In 1948 when Miss Achelis undertook a South American trip on behalf of The World Calendar, Señor Don Luis Montero y Tirado was most hospitable, facilitating and making most pleasant her visit of three days in Lima.

Señor Montero y Tirado—a successful and outstanding business man—was on a friendly basis with the Foreign Ministry which frequently assured him of the Government's favorable advocacy of The World Calendar.

The Association extends to the family of Señor Montero y Tirado its deepest sympathy.

THE CALENDAR REFORMED

The extract below is from Robert Grosseteste, a volume of essays edited by D. A. Callus and published this year by the Clarendon Press, Oxford, commemorating the seventh centenary of the death of the great scholar and bishop.

A GOOD example of Grosseteste's persisting influence is that of his work on the reform of the calendar. On this subject he wrote four separate treatises: a *Canon in Kalendarium* and a first *Compotus* probably before 1220; a *Compotus Correctorius* probably between 1215 and 1219, to correct the two previous works; and a *Compotus Minor* introducing further corrections in 1244. The theoretical astronomical basis of these writings Grosseteste expounded in the *De Sphaera*, which may be dated between 1215 and 1230, perhaps about 1220.

The inaccuracy of the calendar used in the West was noted at the end of the eleventh century by a chronicler who pointed out that the paschal new moon was falsely predicted. About a century later Roger of Hereford tried to get an accurate reckoning of the mean lunar month. By the beginning of the thirteenth century a fuller knowledge of Greek, Jewish, and Arabic systems of chronology brought to the fore the need to reform the Latin calendar and provided the knowledge by which this could be done.

The basic difficulty in the Latin calendar was the need to combine reckonings based on the length of the solar year with those based on the movements of the moon, since the day, the lunar month, and the solar year are incommensurable. No number of days can make an exact number of lunar months or solar years, and no number of lunar months can make an exact number of solar years. An accurate calendar must therefore include a system of *ad hoc* adjustments.

The immediate practical interest in the reform of the calendar was that its inaccuracy produced gross errors in the date of Easter and thus in the whole series of movable feasts of the Church. Moreover, it was obvious to the eye that the calendar was wrong. In the Julian calendar, long established in the West, the length of the year was reckoned as $365\frac{1}{4}$ days. The relationship between the lunar month and the solar year was determined by means of the nineteen-year cycle, according to which nineteen solar years were considered equal to 235 mean lunar months. But these times were not exactly equal, and an error remained even after further systems of adjustment had been introduced. Grosseteste showed that, with the system in current use, in every 304 years the moon would get 1 day, 6 minutes, 40 seconds older than the calendar showed. He pointed out, in the tenth chapter of the *Compotus Correctorius*, that by his time the moon was never full when the calendar said it should be, and that this was especially obvious during an eclipse. As Roger Bacon, who continued Grosseteste's work for calendar reform, scathingly put it in the fourth part

of his *Opus Maius*: "every computer knows that the beginning of lunation is in error 3 or 4 days in these times, and every rustic is able to see this error in the sky."

Easter Day was always the first Sunday after the full moon on or after the spring equinox. Grosseteste pointed out that in the contemporary reckoning of Easter there were two errors. First, because the solar year was not exactly $365\frac{1}{4}$ days, the true equinox then fell on an earlier date than that indicated by the Julian calendar; this is clear, he said, from observations with instruments and from the more accurate *Toletan Tables* made by the Arabs. The second source of error was the inaccuracy of the nineteen-year cycle for the moon. It was generally supposed that the current method of reckoning Easter had been laid down by the Council of Nicaea. Though appreciating the understandable conservatism of ecclesiastical authorities, Grosseteste said that there was an undoubted need for reform.

Grosseteste's plan for reforming the calendar was threefold. First, he said that an accurate measure must be made of the length of the solar year. He knew of three estimates of this: that of Hipparchus and Ptolemy, accepted by the Latin computists, that of Al-Battani, and that of Ibn Thebit. He discussed in detail the systems of adjustments that would have to be made in each case to make the solstice and equinox occur in the calendar at the times they were observed. Al-Battani's estimate, he said in the first chapter of his *Compotus Correctorius*, "agrees best with what we find by observation on the advance of the solstice in our time." The next stage of the reform was to calculate the relationship between this and the mean lunar month. For the new-moon tables of the *Kalendarium* Grosseteste had used a multiple nineteen-year cycle of seventy-six years. In the *Compotus Correctorius* he calculated the error this involved, and proposed the novel idea of using a much more accurate cycle of thirty Arab lunar years, each of twelve equal months, the whole occupying 10,631 days. This was the shortest time in which the cycle of whole lunations came back to the start. He gave a method of combining this Arab cycle with the Christian solar calendar and of calculating true lunations. The third stage of the reform was to use these results for an accurate reckoning of Easter. In the tenth chapter of the *Compotus Correctorius*, he said that even without an accurate measure of the length of the solar year, the spring equinox, on which the date of Easter depended, could be discovered "by observation with instruments or from verified astronomical tables."

Grosseteste can truly be claimed as the first great English scientist and philosopher of science. At a time when guidance was essential, he provided England's young university with a creative understanding of science that made it for a time the leading scientific center in Christendom, and enabled it to contribute to the modern world something entirely new. Stern and intellectual by nature, he called his disciples to high intellectual tasks, yet at the same time inspired a strong personal devotion. He was "the true teacher who interiorly illuminates the mind, and shows the truth."

Learning About Time Zones

From Robert Lee Morton: *Teaching Children Arithmetic*, New York: Silver Burdett Company, 1953. (Pages 431, 432.)

REFERENCE should, of course, be made to the 180th meridian as the *International Date Line* and the calendar change of a day which must be made by persons crossing that line. Pupils should be able to see why this change is necessary and the reason for the direction of the change for those traveling eastward and those traveling westward. Persons traveling eastward lose an hour each time they cross a zone line. When they cross the International Date Line this accumulated loss of time is paid back, as it were, by giving them an extra day. If they cross the line on Tuesday, they find that it is Monday on the other side. Conversely, if they cross the line on Monday when traveling westward, they find that it is Tuesday on the other side. In actual practice, the time adjustments on ships are usually made at night so that the passengers have two Tuesdays (or whatever the day may be) going eastward and skip Tuesday entirely if traveling westward.

Eighth-grade pupils may be interested in reading about efforts which are being made to improve the calendar. They may note that there are 181 days in the first six months of an ordinary year and 184 days in the second six months. They may also note that in an ordinary year the number of days in the first three months is 90; in the second three months, 91; in the third three months, 92; and in the fourth three months, 92. The result is that statistics on such matters as the output of manufactured goods by months or so-called "quarters" are not strictly comparable.

One contractor borrowed \$100,000, in an ordinary year, for a period of three months with interest at 5 per cent per annum and signed a promissory note on the 10th of February. Since the note was due 10 May, he had the use of the money for 89 days. Another contractor borrowed an equal amount at the same rate of interest but signed a note on the 10th of March. Since

his note was due 10 June, he had the use of the money for 92 days. Both paid the same amount of interest, namely, \$1250. If the first contractor had waited 92 days to repay the loan, he would have had to pay additional interest in the amount of \$41.67.

One of the most serious and constructive efforts to improve the calendar is that being made by The World Calendar Association. It will be seen that each quarter has a 31-day month and two 30-day months, there being 91 days in each quarter. The one day which is left over in an ordinary year is called *Worldsday* (a World Holiday) and is added on as a holiday at the end of December. . . . The extra day provided by each leap year is added on as a holiday at the end of June and is called *Leapyear Day* (another World Holiday).

The fluctuating date of Easter has been the subject of considerable concern and discussion. The earliest possible date on which Easter Sunday can fall is 22 March and the latest possible date is 25 April. The earliest Easter in the 20th century occurred in 1913 when the date was 23 March. The date will be 23 March again in the year 2008. The date of Easter was actually as late as 25 April in 1943, but this will not happen again during the 20th century.

Easter is the first Sunday after the full moon that falls on or after the spring equinox (21 March). If the full moon falls on Sunday, Easter is observed one week later. One proposal which has received considerable support is that Easter be the first Sunday after the second Saturday in April.* This would make the date on our present calendar range from 9 April to 15 April.

* *Editor's Note:* The World Calendar Association does not propose a special date for Easter. Since this is a religious matter, the dating is left to the proper ecclesiastical authorities.

The Riddle of the Year

There is a father with twice six sons; these sons have thirty daughters a piece, partly-coloured, having one cheek white and the other black, who never see each other's face, nor live above twenty-four hours.—R. Chambers, *The Book of Days*.

UNITED STATES BLOCKS WORLD PROGRESS ON CALENDAR REFORM

The opposition of the United States Department of State to any change in the present calendar, and its recommendation to the United Nations "that no further study of this subject should be undertaken," has evoked letters of protest from individuals and organizations in all parts of the United States. Typical letters, addressed for the most part to Secretary of State John Foster Dulles or Secretary-General Dag Hammarskjöld of the United Nations, were published, in part or in their entirety, in the June Journal of Calendar Reform, as a matter of widespread public interest. Additional letters follow:

Honorable Dean P. Taylor
House of Representatives
Dear Mr. Taylor:

Have you been following at all the movement for calendar reform actively promulgated for the past 25 years by The World Calendar Association, which has made notable progress within the past few years and is now before the Economic and Social Council of the United Nations? It is a well-considered effort, more important than many people realize, which has been one of the objectives of Lake Placid Club Education Foundation for many years. The enclosed folder, "The World Calendar—Dates, Dollars, Common Sense," summarizes very briefly the highlights of the situation.

The most recent step in this direction was a resolution of the 18th session of the U. N. Economic and Social Council asking the governments of the world to express their views by some time early this year, in time for the 19th session. Among the replies received, that of the United States, which should have been a leader in such a movement for increased national and international efficiency, was not only completely negative, and backed by obvious special pleading for one minority group, but also gratuitously discourteous in criticizing the action of the U. N. in considering the matter at all.

Won't you please contact the State Department and determine, if possible, what

influence is responsible for such an obvious misdirection of influence, and what can be done to rectify it.

GODFREY DEWEY
Lake Placid Club
Education Foundation

Lake Placid Club, New York, July 15, 1955

My dear Mr. Secretary:

I was shocked to read an article in the Albany *Knickerbocker News* recently, to the effect that "our State Department has sent a note to the U. N. opposing any change in the present calendar. . . ."

While I was natural science editor of *The Christian Science Monitor* I made a very thorough study of all the various plans for calendar reform, in the course of which I reached the personal conclusion that (1) such reform would benefit nearly everyone on earth and harm no one, (2) that business, law, and government stood to gain many advantages in improved bookkeeping and greater ease in keeping track of calendar dates and events, (3) that the best calendar possible, in view of our dependence upon arithmetic and the heavenly bodies for measurement guidance, is the calendar proposed by The World Calendar Association.

I don't know who took the step for you, expressing to the United Nations "this government's opposition to any change in the present calendar" adding that any further

study would serve no useful purpose, but it was certainly not an open-minded group examining carefully the many benefits which could be ours from adoption of a better calendar. As a citizen I'd like to ask that more careful attention be given to this matter. An improved calendar would be an achievement for which the leaders of this administration would be remembered long after their other accomplishments are forgotten.

HERBERT B. NICHOLS

Research Services Division

General Electric Company

Schenectady, New York, May 11, 1955

Dear Mr. Secretary:

As a citizen of the United States and a life-long student of the calendar and of suggestions for calendar reform, I am respectfully adding my protest to the large number which I am sure you must be receiving from interested people throughout the country, against the astonishing attitude of the State Department regarding the recent request for an official study of this important subject by the United States Government.

It is well known everywhere in academic and political circles that an urgent need for adoption of an improved international calendar exists in every civilized country today, and you are doubtless acquainted with the excellent work that has been done by The World Calendar Association of New York during the past three decades towards achieving this end.

Many years ago I read with keen interest your scholarly and valuable *Thoughts On Soviet Foreign Policy*, and I am quite sure that a man of your erudition and experience must realize the importance of this calendar question in its various aspects—economic, scientific and political. For this reason I feel that it is unnecessary to discuss in detail these different phases of the movement, as it must be obvious to any serious observer that from the economic viewpoint alone the vast saving in time and money that would be achieved by adoption of the proposed perpetual calendar is a matter of vital interest to millions of workers in every country throughout the world.

Careful consideration has already been given to this subject by competent authorities in more than thirty different countries in the great family of nations, and more are constantly joining the group of those who are convinced that the need for an international calendar is of paramount importance to everyone.

I therefore respectfully request that the recent decision of the State Department to devote no further study to this question at the present time be revised, and that a Committee be formed to give careful consideration to the proposed perpetual calendar with all its obvious and manifold advantages.

FRANK VINCENT WADDY

Public Accountant

Hollywood, California, May 13, 1955

Dear Mr. Secretary:

As one who is interested in calendar reform, I am particularly concerned at the reply of the State Department to the request of the Secretary-General of the United Nations for an opinion on the desirability of calendar reform. From the position taken it would appear that our country does not have an open mind in connection with this subject which I feel, from reading and studies I have made, is one that should vitally concern all of us and should be particularly desirable in connection with business.

The only objection I have heard is from a decidedly minority group who, because of their religious precepts, do not desire any change. I cannot see where the reform desired would make any change in their religious calendar. They would be free to set the dates of their religious observances or holidays as they saw fit. Certainly when the Gregorian calendar was adjusted their religions must have been affected. They were able to make the adjustment then, and the same thing can be done now.

I sincerely trust that you will give this subject further consideration and withdraw your reply to the Secretary-General of the United Nations.

VINCENT P. MCMURDO

Pacific Coast Manager

Luckenbach Steamship Co.

San Francisco, California, May 10, 1955

Dear Mr. Secretary:

. . . The views expressed by the State Department of the United States ignore the endorsements of large and influential organizations of American citizens who have favored a reform of the calendar for many years. . . .

In his reply to my letter in the premises, Senator Mundt said that there is no legislation before Congress at the present time and that the Foreign Relations Committee is not contemplating any hearings on the subject. He suggested that I write directly to the Secretary of State to make him aware that there is general public interest in the matter and to inquire the basis for the expressed opposition to the desirability of calendar reform at this time.

Your kindness to favor me with a non-steretyped reply will be appreciated.

JAY B. ALLEN

President, McKinney &
Allen, Inc.

Sioux Falls, South Dakota, May 26, 1955

Dear Sir:

. . . It has recently come to my attention that the State Department of the United States has chosen to ignore the endorsements of the many and large organizations of American citizens who are in favor of making a reform in our present calendar.

Those who would consider a reform such as proposed by The World Calendar Association to be of no useful purpose can hardly be unaware that all the facts are against such a view. Over and over again it has been pointed out . . . what great economic, social, educational, and scientific advantages would accrue to the present-day world by the adoption of a systematic perpetual calendar. Moreover, this particular calendar has the enthusiastic approval of men and women in every walk of life and in scores of places throughout the world.

To say that the United Nations can "find better things to do than tinker with the calendar," is to dismiss without good reason a quarter of a century of exhaustive study and effort toward improvement of what is patently a clumsy method of time-keeping. Furthermore, thus to characterize this effort is to put aside something which can be one way of offering harmony

and order to all strata of society—surely a matter of interest to and within the sphere of action of the United Nations.

No worthwhile reform is universally accepted at the outset, and it is neither necessary nor reasonable to permit the lack of perfect unanimity to hinder the prompt adoption of this proposal, which will be of so great benefit in every phase of life and will work hardship on no one.

In this day of speedy communication, the change in the calendar could easily be effected without any disruption of the ordinary course of business and private life, since it is for all concerned a simplification and an improvement. I see no reason why we should put off its adoption.

Of all the people I have met, both in the classroom and otherwise, I have yet to find even one person who is not fully in favor of and even enthusiastic about this proposed calendar reform once it has been correctly understood and even the least of its advantages indicated. It will be of even greater individual and universal value than was the adoption of the Standard Time zones.

I hope that you will use your influence to see that this issue is not shelved but is given serious consideration, as it deserves, so that it will not be long before we have a calendar that is logical and perpetual.

JOB WINDOLPH, O.F.M., M.S.

Department of Mathematics,
Quincy College

Quincy, Illinois, May 11, 1955

Dear Mr. Secretary:

The announcement that the Department of State is summarily rejecting a fair consideration of calendar reform in the forthcoming session of the United Nations comes as no little shock.

Does the Department consider that the proposal lacks merit? If so, in what respects? As just one of the hundreds of thousands of individuals who see a much needed simplification and orderliness in The World Calendar, I would like very much to know the reasoning which underlies the decision. And if the study was rejected on other grounds than its inherent merit, I would very much like to know about that, too.

When you give thought to the many nations of the world which have approved The World Calendar, not to mention the religious groups here and abroad, the tens of thousands of business and professional organizations which have studied and endorsed the project, it is incredible that the United States—of all nations!—should arbitrarily reject a fair and open-minded study of a project which has so many obvious advantages in its favor.

I sincerely hope and strongly urge that the subject be given further immediate consideration to the end that calendar reform may at the very least have a place on the study agenda of the United Nations.

CONRAD BREVICK

Brevick Motors, Inc.

Bluefield, West Virginia, May 7, 1955

My dear Mr. Secretary:

I have read with interest but with disappointment your release of March 31st expressing opposition to proposed changes in our calendar. I know something of the burden of your labor for our country and the free world, and certainly appreciate the same but in this opposition to calendar reform I think you are greatly mistaken and hope that your position may be altered, this for the following reasons:

1. Cooperation through the United Nations with the other nations of the world in the matter of calendar reform would help, as it seems to me, to bring about cooperation among the nations on something else vastly more important, even reduction of armament and world peace.

2. It seems to be self-evident, and your release does not deny this, that the proposed World Calendar would be a very great advantage over the out-moded and defective calendar now in effect.

3. If, as you say, opposition to a proposed change is based on religious grounds, those with religious objections can go forward as they do now even if the new calendar is adopted. Those making these religious objections want the "Seventh Day" for their Sabbath. That is what they have now notwithstanding provisions to the contrary in the provisions and practices of the rest of the country.

4. It seems to me further that opposition

to the proposed calendar reform is a step backward and would be so interpreted and regarded by forward-looking people throughout the world. Such opposition would even be notice to other nations that the United States is either unwilling or unable to cooperate on anything.

CLARENCE C. CALDWELL

Attorney and Counsellor

Sioux Falls, South Dakota, May 12, 1955

Dear Mr. Secretary:

This letter is to express my individual protest to the action of the State Department in informing the Secretary-General of the United Nations that "this government" is opposed to any change in the present calendar, and that any further study "would serve no useful purpose."

It is quite . . . apparent that you have either been uninformed or have ignored completely the endorsement of The World Calendar which has been given by hundreds of business organizations at national, state and local levels and by a majority of Christian religious groups, including Catholic and many Protestant denominations.

The report that "opposition to any change has been based generally on religious grounds" certainly represents a small minority from the religious point of view.

We sincerely hope that this decision on the matter can be reconsidered so that there can be favorable consideration of a study on calendar reform by the United Nations in its forthcoming session of the Economic and Social Council.

WAYNE E. POLLARD

Pollard and Wheeler, C.P.A.

Rockford, Illinois, May 9, 1955

To the Secretary of State of the United States and the Secretary-General of the United Nations:

I wish to add my voice and the voices of my whole family to the third generation to the chorus of the forward-looking citizens of this country, and of many other countries of this 1955 world, who are whole-heartedly in favor of the proposals for a World Calendar as made by The World Calendar Association.

I consider it most regrettable that the State Department of the United States of

America should have taken a stand . . . which favors giving no further study to this question and discarding the idea completely.

It seems very evident that the State Department has listened more to the non-relevant protests of very minority religious groups than to the wide-spread desire for calendar reform on the part of large and influential bodies of citizens who do not feel that the proposed change to a consistent, non-changing arrangement of the calendar infringes in any way on the religious freedom of any citizen or creates any logical difficulties in connection with the worship customs of any sect.

We trust that the Economic and Social Council of the United Nations . . . will disregard the reply of the State Department of the United States of America, and will vote to create a body to consider with an open mind any and all suggestions so far made for a revision of our outmoded calendar.

CARLETON A. WHEELER
Gray Rocks Recording
Service

Peterborough, New Hampshire, May 5, 1955

Dear Mr. Dulles:

As a staunch supporter of movements for calendar reform . . . I should like to ask that you give every consideration to a study of The World Calendar which, I understand, may be made by the United Nations in the very near future. It is my belief that if the results of this study are made public, the members of the United Nations would vote overwhelmingly in favor of adoption of this more stable method of time measurement.

W. THETFORD LeVINSS
Lecturer and Writer

Santa Fe, New Mexico, May 17, 1955

Dear Sir:

It has pleased your correspondent to see the gradual and steady progress of the proponents of calendar reform. They have enlisted support from group after group—they have battled upward against the restraint of small bigoted groups. . . .

It is difficult, and impossible, to argue over questions of faith. But should small minorities stand in the way of the progress

of the world? Islam, with the requirement of several daily periods of worship, has found a way to live with the time clock and the eight-hour day. The Jewish faith has found a way to integrate their calendar with ours. It took centuries for some Protestant faiths to accept Pope Gregory's improvements. . . .

Shouldn't the United States be in the forefront of progress? Should we set an example of backward restraint?

This movement, if you will study it, is not the work of a small group of faddists. Its foundations are solid—it has the support of thousands of thinking citizens.

I hope, dear sir, that you will put some of your most substantial workers to a few hours of study and weigh the advantages of this small reform against the disadvantages. The results may surprise you.

A. A. MERRILL
Engineer

General Electric Company
Schenectady, New York, May 2, 1955

My Dear Mr. Secretary:

I am very much concerned in regard to the State Department's position in regard to calendar reform and particularly the position taken in regard to the Secretary-General of the United Nations' request for an opinion in regard to the desirability of calendar reform.

It would seem that the accuracy of the methods of recording time in the interests of human welfare generally should transcend the interests of minority groups concerned with their own philosophy or religious beliefs, and it is hoped that the position taken can be modified and the door opened for United Nations committees to study the needs and methods for reforming the calendar to the end that mankind generally can best be served.

It is my understanding that a study on calendar reform might be undertaken at the forthcoming session of the Economic and Social Council. . . . Please add my request for re-evaluation of the State Department's position to the many others I am sure you have received and will receive in regard to this matter.

JAMES M. HUNTER, A.I.A.
Architect

Boulder, Colorado, May 3, 1955

Dear Sir:

We are somewhat disturbed over the position taken by the United States with respect to World Calendar Reform.

We believe that a good many businessmen share the feeling that the proposed calendar revision would greatly simplify the keeping of records and in making comparative studies.

This calendar has been reformed from time to time in the past and thus we can see no logical reason for not studying the possibility of making further revision which would bring the calendar into line with modern business practice.

As you perhaps already know, a number of business houses already are operating on a principle similar to that which has been recommended by The World Calendar Association. We believe that a useful service would be performed by carrying calendar reform studies to the point where some decision might actually be made.

C. EDGAR GOYETTE

Manager, Tucson Chamber
of Commerce

Tucson, Arizona, May 14, 1955

My dear Mr. Secretary:

I was much disappointed to learn of the attitude of the State Department regarding the possible future use of The World Calendar by the member countries of the U. N.

Judging by the approval of various organizations in this area, when they have given this matter careful consideration, I feel sure that the majority of the informed people of our country would be in favor of The World Calendar.

I therefore urge reconsideration of the position of our State Department and that a study committee be set up by the United Nations to give this matter proper and fair consideration.

GLEN B. LERCH

Lerch Brothers, Inc.

The Iron Ore Chemists

Hibbing, Minnesota, May 11, 1955

Dear Sir:

May I be permitted to protest the attitude of the United States on the question of The

World Calendar, to come before the United Nations. I am by profession a scientist, and the present antiquated and illogical calendar is an offense to anyone who deals with precise, organized measurement, whether of time, mass, volume or other measurable physical characteristic. The present calendar is as illogical as a monetary system not based on decimals, and who would want to revert to this?

Please, for the sake of scientists, business executives, transportation facilities and many others, advocate a logical world calendar, as so ably worked out by The World Calendar Association.

LYNDON F. SMALL

Bethesda, Maryland, May 11, 1955

Dear Mr. Secretary:

I never thought I would see the day when the United States Government would close its mind to social progress. What archaic agent of the State Department, and upon whose orders, assumed the responsibility to inform the Secretary-General of the United Nations that the Government of the United States is not interested in calendar reform?

This decision carries all the age-old prejudice and superstition which fought the adoption of Standard Time zones as a reflection upon God's time. In the sense, time zone reform and calendar reform are very similar. Both have been accused as being sacrilegious when neither actually is.

Apparently the State Department is interested in appeasing a small religious minority at the expense of the many millions of people who have the intelligence to secure a better measuring tool to account for our days and months.

As a teacher of General Science for five years, I found little difficulty in showing ninth grade students the fallacy of the old calendar and the convenience of the new.

In conclusion, I would like to state that we should have better reasoning power in the State Department. . . . If the so-called "backward" nations of the world can accept The World Calendar, surely the State Department can spend a few moments in trying to understand the wonderful convenience in The World Calendar.

DON OAKES

San Lorenzo, California, May 4, 1955

Sir:

I was shockingly surprised to read that our State Department, in a letter to the Secretary-General of the United Nations, recently announced that our government is opposed to any change in the present calendar, and feels that "any further study would serve no useful purpose." In my amazement I can hardly realize that such a statement could have been made. It does not sound like the voice of a progressive, forward-looking country, but rather that of some backward "under-developed country." Is it possible that a small minority group can bring pressure to bear on our government and overpower the wishes of a majority who want our calendar reformed?

While I realize that there are many serious problems of diplomacy confronting us today, nevertheless we should not close our minds to improving our calendar, which deals so vitally with all aspects of our lives. Instead of holding back, our country should take the lead in studying and making possible this civil reform, which is non-sectarian and universal in character. There is nothing to prevent groups of people from keeping their own days of religious observance, apart from the civil calendar. Indeed, every day can be a day of worship of our Creator, a day of dedication to the cause of righteousness and peace.

Since the beginning of recorded history there have been at least a thousand different calendars used in computing time. The calendar has never been static, but was evolved from primitive beginnings and has been improved over the centuries. But why should we today feel that what was satisfactory in 1582, when Pope Gregory reformed the Julian calendar, which in turn was an Egyptian replacement of the old Roman calendar in use during the *Pax Romana*, should suffice us today with our complex problems of industry and finance? The airplane, radio and television have made this a different world from that of 1582.

The disadvantages and inadequacies of our present calendar are strikingly shown in an article appearing in the March 1955 issue of the *Journal of Calendar Reform*, published by The World Calendar Association. In this article, entitled "Profits from

a Better Calendar," Mr. Walter Mitchell, Jr., a leading industrial consultant, shows how business could save substantial sums, and how our lives could be simplified by the world-wide adoption of a modern, stable calendar.

Today we take Standard Time for granted, and few of us realize the inertia and bitter opposition that the railroad men had to overcome previous to 1883, when they created the standard time zones in this country and Canada. Those men were denounced and accused of trying to "supercede the sun," of trying to regulate our lives, our rising in the morning and our retiring at night. The same thing happened again during the first World War, when many people angrily opposed our adoption of Daylight Saving Time, calling it "Mr. Wilson's time, not God's time," ignorant of the fact that it had been tried first in Germany and then in England and found helpful.

And are we going to let inertia or the pressure of a minority hold us back from progress? Time itself is but a symbol, and Einstein has shown us that it is relative. Anyone who has travelled extensively knows how he must advance or retard his watch as he crosses a time-belt. Yet he does not worry about the gain or loss of those hours of time. Why should we be averse to placing the 365th day *outside* the year, thereby making our regular year consist of 364 days, which can be accurately divided into halves of 182 days each and quarters of 91 days each, in a simple and convenient way? Many firms in this country, in order to have their business run on a more efficient basis, have adopted special calendars of their own, printed for company use. It is time for us to join with other forward-looking nations in throwing off this inconvenient and outmoded method of time reckoning. In the words of the Apostle Paul, "Now is the accepted time!"

I earnestly hope that a committee of the United Nations . . . will be set up to give an impartial study of this question of calendar reform.

KATHERINE WELLENKAMP
New York City Law Dept.

Jackson Heights, New York, May 10, 1955

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READING MATERIAL

The following material may be obtained on request from The World Calendar Association, 630 Fifth Avenue, New York 20:

BOOKS

Time Counts, by Harold Watkins. London 1954.

Consider the Calendar, by Bhola Panth. New York 1944.

MONOGRAPHS AND PAMPHLETS

The World Calendar—Questions and Answers. A 16-page summary of the most significant questions concerning the value of The World Calendar.

The Present Calendar and Its Effects on American Business, by Professor John M. Firestone, in cooperation with the Controllers Institute of America.

Profits from a Better Calendar—A Business-Industry Study, by Walter Mitchell, Jr.

A Better Calendar Means a Better World. The World Calendar Association, Inc.

Clarifying Calendar Reform, by Elisabeth Achelis.

Calendars Old and New, by Sir Harold Spencer Jones.

The World Calendar and Religion. The World Calendar Association, Inc.

Calendar Reform in India, by Professor M. N. Saha, F.R.S.

Israel's Calendar Confusions, by Sulamith Rogoff.

Time for Action, Says France, by Abbé Chauve-Bertrand.

Active Interest in Ireland, by Professor John J. O'Meara.

A Reformed Calendar, by Lord Merthyr.

Now Is the Time, by James Avery Joyce.

Calendar Reform and the Seven-Day Week, by Elisabeth Achelis, James Avery Joyce and Daniel Sher.

La Réforme du Calendrier Devient de plus en plus Vitale, by Jacques Tiroufflet.

What Israel and World Jewry Would Gain from Calendar Reform, by Daniel Sher.

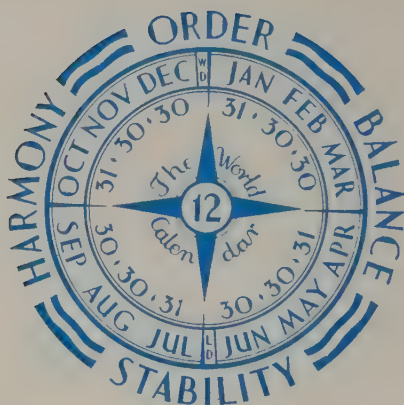
The World Calendar and the World's Workers, by J. W. Nixon.

Calendar Reform Before the United Nations:

1. Basic Facts: Essential Dates, Excerpts, References.
2. 1947 Memorandum by Secretary General Trygve Lie.
3. Reply to the World Jewish Congress.
4. Jewish Support for The World Calendar, by Daniel Sher.
5. Economic and Social Advantages of The World Calendar, by James Avery Joyce.
(Also in French and Spanish.)
6. Abridged Report of ECOSOC Discussion (July 1954).

Journal of Calendar Reform. Back issues for the past twenty-five years are available in the leading libraries. Current numbers supplied on request.

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Summary of World-Wide Activities

Calendar Change—A Challenge

December 1955—January 1956

Final Issue—see Back Cover

THE WORLD CALENDAR

1ST
QUARTER

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

2ND
QUARTER

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

3RD
QUARTER

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
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29	30	31					26	27	28	29	30			24	25	26	27	28	29	30

4TH
QUARTER

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
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29	30	31					26	27	28	29	30			24	25	26	27	28	29	30 W

W (Worldsday, a World Holiday) equals 31 December (365th day) and follows 30 December every year.

W (Leapyear Day, another World Holiday) equals 31 June and follows 30 June in leap years.

In this Improved Calendar:

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CALENDAR REFORM

December 1955 — January 1956

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Elisabeth Achelis, Editor
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THE WORLD CALENDAR FOR THE WHOLE WORLD

VOL. XXV

DECEMBER 1955—JANUARY 1956

No. 4

To everything there is a season, and a time to every purpose . . . a time to plant, and a time to pluck up that which is planted . . . —Ecclesiastes 3: 1, 2.

FOR twenty-five years the Incorporated World Calendar Association has dedicated its time, purpose, and resources to planting The World Calendar among many peoples and in many lands. Activities, first in the United States and Europe, later flourishing throughout the Western Hemisphere, spread into many nations, implanting the reform before the League of Nations. This resulted in seventeen countries approving in principle The World Calendar. Later Peru, Panama, India and Yugoslavia transplanted the reform to the United Nations.

Now there are numerous Committees and Affiliates doing the spadework for adoption in many countries.

With the establishment of the United Nations, the Incorporated Association was instrumental in forming The World Calendar Association, International. The latter in 1953 was given the honored privilege of becoming a registered member of the Non-Governmental Organizations—a valued group working closely with the Economic and Social Council of the United Nations. This gratifying recognition was appreciatively received, and it is a matter of satisfaction that this valuable consultative relationship will be retained by the International World Calendar Association.

To India belongs the distinction of not only presenting The World Calendar Reform to ECOSOC but also the even greater credit of retaining it there notwithstanding some strong opposition. India's action had been anteceded several years earlier by Peru and Panama.

Therefore the Association takes pardonable pride that the seed for The World Calendar sowed so many years ago has now reached the final stage—the stage of reaping. What organization is better equipped to reap that which has been “planted” than the world organization—the United Nations?

On page 166 of this issue, the article "United Nations and Calendar Reform" informs the readers of the recent developments.

The valued manuscripts and correspondence of the Association have been graciously accepted by the Congressional Library in Washington, D. C., where they will be preserved and available to scholars, historians and researchers of the calendar.

The copyright of The World Calendar will be preserved, see page 199.

While the Incorporated Association will discontinue its operations with the transfer of international activities and headquarters to Ottawa, Canada, the end of March, Miss Achelis will be available for consultation on calendar reform—The World Calendar—and may be communicated with at the address given in the *Announcement*.

The World Calendar had a good beginning and we are confident it will continue to be favored in its progress and fulfillment.

CANADA

House of Commons Debates

OFFICIAL REPORT

(Extracts from a speech by Louis Edouard Roberge, M.P. on 23 January 1956)

IN our days, speed prevails in our way of living and everything is streamlined in industry, in accounting, in manufacturing processes and in everything connected with industry and trade. This world calendar would meet present conditions better than the Gregorian calendar we are now using. The purpose of this world calendar would

be to improve, regularize and stabilize a time system. I believe it would more adequately meet our modern conditions and would respond more to the present needs of industry, government, agriculture, religion, science and education—every field, one might say.

I believe this calendar would be an improvement on the present one.

ANNOUNCEMENT

THE Editors announce that with this December 1955-January 1956 issue the *Journal of Calendar Reform* will cease publication.

The *Journal of Calendar Reform* has been published for twenty-five years by The World Calendar Association, Incorporated, and while the work to which the *Journal* has been devoted will be carried on by the *International World Calendar Association* the Incorporated Association will be dissolved, as is referred to elsewhere in this last number.

It is likely that the *International World Calendar Association* will issue Bulletins from time to time and it is suggested that readers who wish to be kept informed on the progress of calendar reform in the international field communicate with the new President, A. J. Hills, P. O. Box 20, Besserer Street, Ottawa, Canada.

In connection with the transfer to and maintenance of headquarters at Ottawa, funds to carry on the work will have to be raised, and Mr. Hills asks us to state that contributions to the cause of calendar reform will be gratefully received.

Attention is directed to the changes in organization, which are covered in the report of the Annual Meeting of the International Association included in this issue.

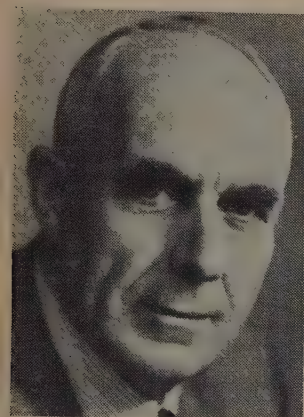
Miss Achelis retains her connection with the International Association as President Emeritus. Freed from restrictions applying to the Incorporated Association Miss Achelis will use her efforts towards obtaining a more favorable attitude to The World Calendar in the United States Government and approval among an increasing number of citizens. Those wishing to communicate with Miss Achelis should address her at P.O. Box 224, Lenox Hill Station, New York 21, New York.

It is the Editors' sincere wish that all who have supported the cause of calendar reform and helped to bring it to its present status, of being before the Economic and Social Council of the United Nations, will continue their efforts until our objective is fully achieved.

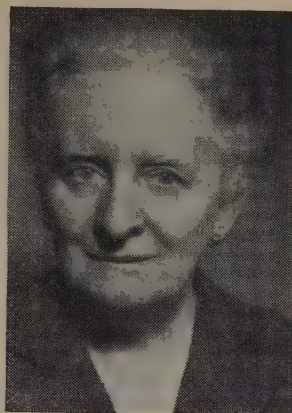
To the many contributors who have given so fully of their knowledge and experience the Editors express their sincere gratitude. Their contributions have enabled the *Journal of Calendar Reform* to hand to posterity a valuable historical record. It is felt that the *Journal* has performed a notable service in enlightening its readers and the public generally of the need for an improved and stabilized calendar.

The Editors

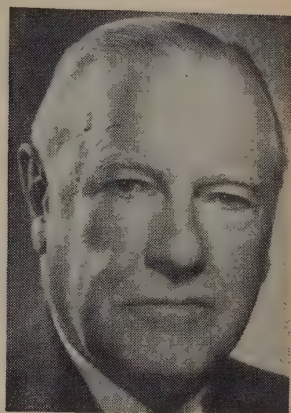
INTERNATIONAL ASSOCIATION'S OFFICERS



Sir Harold Spencer Jones



Elisabeth Achelis

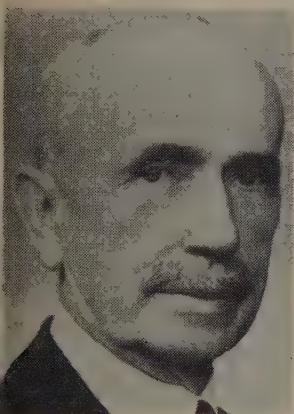


Arthur J. Hills

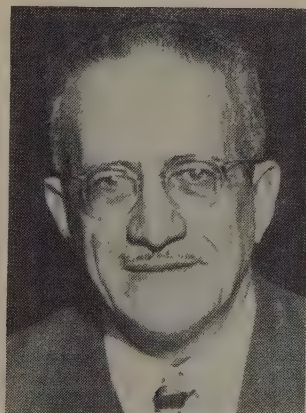
HERE are the newly elected officers of the International World Calendar Association of which the headquarters is being established in Ottawa, Canada, as referred to in the "Announcement" and elsewhere in this *Journal*.

Miss Elisabeth Achelis, retired President of the International Association, was elected President Emeritus. Sir Harold Spencer Jones, former Astronomer Royal of Great Britain, is the Honorary President.

Mr. Arthur J. Hills, the new President, was formerly Assistant Director General of the International Association and is Chairman of the Canadian Affiliate. Professor A. D. Ross, Chairman of the Australian Affiliate, and Dr. Ricardo J. Alfaro, of Panama, one of the foremost sponsors in Latin America, are the Vice Presidents; and Mr. James Avery Joyce, Honorary Secretary of the British Section, is the Consultant and Representative at the United Nations.



Prof. A. D. Ross



Dr. Ricardo J. Alfaro



James Avery Joyce

U. N. PHOTO

UNITED NATIONS and CALENDAR REFORM

By Elisabeth Achelis

IT is indeed fortunate for mankind that the governments of the world have in the United Nations a forum in which to clarify world problems of our day and arrive at just solutions.

When India requested that World Calendar Reform be placed before the United Nations, in October of 1953, it was due recognition of the unique power and influence of that body. India, too, recognized the vast benefits The World Calendar would bring to mankind. India's action was timely and farsighted.

When as a result of India's action the matter came before the Economic and Social Council of the United Nations on 28 July 1954, India reiterated conviction that this was a worth-while and needed movement. Despite opposition the subject, by unanimous decision, was sent to the governments of members and non-members with the request "that they study the problem and furnish their views."

At the resumed 19th Session of the Economic and Social Council, in May 1955, India realized from the number of nations which had not replied that insufficient time had been given for the Secretary-General's request. An extension of time was granted and a further communication was sent to those governments. Replies were to be received up to 1 January 1956 enabling governments further to consider the matter.

Having in mind the good of the cause and its progress, I feel that most effective procedure will come through collective action by government members within the body of the United Nations.

Conviction along these lines came to me most unexpectedly yet forcibly early in March 1955, at the very time I was planning a program in preparation for the May meeting of ECOSOC in New York. This belief was impressed upon me just as strongly and convincingly as twenty-five years ago I was impelled to work for the perpetual World Calendar of 12 months and equal quarters.

Calendar reform having been brought before the Economic and Social Council of the United Nations and having reached international governmental level, I feel that my work on behalf of The World Calendar has been fulfilled and henceforth the reform belongs within the competency of the United Nations.

It is not easy to relinquish the work to which I have been devoted for so long

Yet to me it has become increasingly evident that the security and the consummation of calendar reform could no longer depend upon voluntary associations or personal leadership. It might be said that the mantle had fallen upon the United Nations to deal with this world-wide and momentous question. The United Nations is well equipped to give a comprehensive analysis of the research material available on calendar reform. From such an analysis should emerge the best plan, reached by the seasoned judgment of this impartial international body.

On this new viewpoint being communicated to colleagues and members I was advised to give the matter careful consideration. After an interval of three weeks the conviction of the rightness of my decision compelled me to act.

An interview with the President of the Economic and Social Council followed a memorandum written to him on 30 March 1955. The memorandum was transmitted to Affiliates, Committees and Members of Advisory Councils of the Association toward the end of April—some time necessarily elapsing for translations.

My action was probably as surprising to them as was the more mature point of view to me. Further examination assured me that the United Nations is the proper body to act on calendar reform. I found that this view had been previously expressed in statements of prominent organizations, as follows:

From the International Labour Organization: "So far as concerns the positive action required for The World Calendar to be adopted, this is obviously a matter for the United Nations to deal with, rather than for a single one of the affiliated Specialised Agencies."

From the International Organization for Standardization: "The World Calendar Association had requested ISO to participate in the work of calendar reform; however, inasmuch as the WCA study itself was quite complete, and since certain ISO Member Bodies were unable to take part in such work, the ISO Council decided to abstain momentarily from participating in this reform, due to the fact that it is presently being studied by the United Nations Economic and Social Council."

The Executive Director of the U. S. Chamber of Commerce in an interview informed me that the Chamber would do nothing regarding calendar reform except through the United Nations when it would consider study and action as a mandate.

The "World Calendar Reform" as submitted by India proposed "to adopt for the whole world a new, fixed, uniform and invariable calendar, regulated astronomically according to the movement of the Earth around the Sun, and more regular, scientific and advantageous than the Gregorian Calendar," stating "Such a revision has been the subject of study and research on the part of experts, institutions and international organizations for many years. The consensus of opinion is that a new time system is necessary, adhering to the customary twelve months; but that it should be uniform; an invariable calendar, perpetually the same." Prime Minister Nehru made a statement that "the Gregorian calendar . . . has certain defects which make it unsatisfactory for universal use."

History shows that all reforms are tested by opposition before they are approved, accepted and put into operation. Calendar reform and The World Calendar are no

exceptions. The outstanding opposition stems from certain religious sectarians and it was never the intention of calendar reform to cause a conflict with them.

A statement by the former Pope Pius X makes the distinction between a civil calendar and the observance of holy days very clear: "The Holy See declared that it made no objection but invited the civil powers to enter into an accord on the reform of the civil calendar, after which it would willingly grant its collaboration in so far as the matter affected religious feasts."

Reference is also made to a joint statement issued by the Anglican, Eastern Orthodox and Roman Catholic representatives at the League of Nations that from the point of view of dogma the reform of the Gregorian calendar did not meet with difficulties of such a nature that they can be regarded as insuperable.

Although not entirely silent, dogma and tradition had no place in the establishment of Standard Time which adopted the International Date Line at which point a six or an eight-day week is observed and likewise sectarianism has no place in a civil calendar reform. It is well to point out that the International Date Line agreement is itself an agreement, by the more than a score of nations who signed it, that the continuity of the seven-day week would be broken by everyone crossing that line.

The two new world holidays—*Worldsday* and *Leapyear Day* inserted respectively between two weeks—originated with the Roman Catholic Abbé Marco Mastrofini, a devout churchman.

Worldsday inserted between Saturday 30 December and Sunday 1 January as a date W December or 31 December—a date its very own—would in its annual observance bring mankind together from North, South, East and West in a spirit of joyous recognition of a brotherhood of nations in a more understanding fellowship. This spirit prevailing the week before through the observance of Christmas would reach world-fulfillment on the logical *Worldsday*—New Year's Eve.

Leapyear Day in midyear between Saturday 30 June and Sunday 1 July, also on its own date W June or 31 June, gives balance to the first and second half years and would likewise be observed in a universal spirit of recreation and good will.

When Panama proposed The World Calendar before the United Nations General Assembly in 1949 it had the following to say of *Worldsday*, that it was: "an international holiday, dedicated simultaneously in every country of the world to the universal harmony and unity of mankind, thus knitting all races, creeds, peoples and nations into a closer bond of fellowship, creating world-wide citizenship in the 'One World.' The potentialities of 'Worldsday' for strengthening and promoting international peace among all nations are of great value."

Representative Karl E. Mundt, now Senator, in his speech before Congress, 1946, said: "It would be an impropriety and misfortune were anything so basic and universal to be permitted to acquire a partisan complexion. Time, and the calendar as a standard of time, are the property of all and belong to every person. No party, no race, no religion, and no organization can claim a vested right or ask preferential treatment at the expense of the majority. In our democratic nation the greater good for the greater number must prevail."

For sectarians to oppose the new world holidays on the ground that their way which is best for them is best for all others and that their sectarian outlook should prevail is certainly unjust, unfair and wholly incompatible with the principle of democracy. It would be a real tragedy were a molehill—the alleged unbroken sequence of weeks—to become a mountain, denying truth and fair play.

Ancient Egypt's tragic calendar example may serve as a warning. Her proposition to insert an extra day in the calendar at the end of every four years in order to keep it in harmony with the seasons was defeated. The priesthood was unwilling to accept the extra day and the people were indifferent to calendar change. It was two hundred years later, under the rulership of Julius Caesar, that the extra quadrennial day became an integral part of the calendar. Is history to repeat itself? We are not living in the days of the Pharaohs.

Progress lies in the expanding and developing of ideas with the maturing of the human race. There is no standing still in the scientific, civil and social ways of life. Religion, too, has attributes for expansion and development; it is not restricted to rigid tradition but vital and radiant in its many and ceaseless revelations.

Modern calendar reform deals with an improved *civil* calendar. This being so, the United Nations is the logical international forum to act on the reform from the civil aspects. After this has been accomplished then the various religious groups may adjust themselves to the new stabilizing days as they have done with the International Date Line, an essential prerequisite of Standard Time.

Through my leadership and the efforts of many advocates there were established in many countries strong committees, many of which later became Affiliates of the International Association. While Affiliates and Committees have over the years and still are able to approach all branches of their governments, the Incorporated Association was prevented from seeking legislation in the United States lest it lose its tax exempt status. Because of this I have been prevented from doing in my own country that which I have been urging all other Affiliates to do in theirs.

The State Department in the United States has also taken the stand that Congressional action is a prerequisite to its support of calendar reform in the United Nations. Accordingly the position of the Incorporated Association has become untenable. Because of the untenable position I have resigned from the presidency of the International Association and the incorporated American Affiliate has been withdrawn and will be dissolved.

Twenty-five years of work are positive proof of my adherence to the cause of calendar reform. My vital interest in the work will continue and my considerable experience and knowledge will be available to those who undertake to carry on.

At the request of a number of Affiliates and to remain a Non-Governmental Organization with Consultative Status at the United Nations the International World Calendar Association will continue with the new President, Arthur J. Hills, former Assistant Director General and Chairman of the Canadian Affiliate. Headquarters will be transferred to Ottawa, Canada.

It is anticipated with this change and with Canada now a member of the

Economic and Social Council of the United Nations that World Calendar Reform will be given new vitality and progress is assured. It is my belief that those nations now constituting the Economic and Social Council have an exceptional opportunity to advance adoption of an improved calendar.

The calendar in use today is outmoded for existing conditions. How much more unsuitable will it be for the coming days? On the threshold of changing situations it is necessary to plan and to think for tomorrow and not limit action in terms of today. To rest content for today is not the way to build for better tomorrows; postponement and delay do not lead to progress. There must be a beginning. The time is here and now for the nations represented on ECOSOC to make that beginning. In this way the world will be assured of obtaining a time-plan of harmony, order and stability whereby our days and lives will be made smoother and easier and the many problems of tomorrow will be met more adequately. Herein lies the anticipation of better things to come. Mankind is fortunate indeed to have the United Nations to deal with this vital matter and to take the necessary step for setting the calendar aright—*impartial unbiased study of calendar reform*.

I have confidence that the various Affiliates and Committees together with the many friends and supporters throughout the world will continue their active work and interest toward informing their governments and their peoples of the incalculable advantages of the better civil calendar. It is hoped they will encourage through their governments *international action and study* by the United Nations in the Economic and Social Council. In that manner India, who introduced the reform, will be firmly sustained within the Economic and Social Council, and the United Nations can assume the laudable undertaking of giving to the world an improved stable civil calendar.

Here is a concrete and practical way to encourage *international cooperation among nations*, particularly on a subject as universal as time and the calendar. Time is the great unifier that holds us all in its sway. It recognizes no division, no sectarianism, no nationality, no politics, no personality, and in its eternal moving force urges man ever forward.

CANADA'S WORLD STATUS ENVIABLE

(From *The Ottawa Journal*, 6 December 1955)

ONE of the world's most eminent historians and political economists, France's Professor Andre Seigfried, speaking in the capacity of a trained and balanced observer, has described Canada's international status as one of the most fortunate in the world today.

Speaking to the Ottawa Canadian Club luncheon meeting, on the theme "Canada 57 Years Ago and Now," Professor Seigfried stated that Canada was in the enviable position of not being regarded as a foreigner in Washington, London, Paris or Rome.

In Washington, he said, Canada was considered American. In London, Canada was British; and in Paris, the French-Canadian aspect of this country instilled a sort of kinship; and Canada was likewise drawn to Rome through Roman Catholicism.

RURAL NEWSPAPERS URGE REVISION

By Eva Beard, Kingston, New York

RURAL Americans are conservative by nature. They don't much like any tampering with time. They are still skeptical and resistant to Daylight Saving. My own great-great-great-grandmother thought the change from the Julian calendar to the present Gregorian system, back in 1752, was just a lot of nonsense, and she went right along counting the family birthdays by Old Style.

Yes, we have our own ideas about time. But we are reasonable. The editor of our weekly newspaper, the *News-Leader* (whose family has lived in these parts since the middle eighteenth century), says we will not be against such an improvement as the proposed World Calendar, or any other real improvement, especially if it is going to save us money. As he puts it, we just have to be shown.

The editor, Ira V. D. Warren, is a pretty reliable judge of farm folks. "They will accept the change to The World Calendar very quickly," he says, "because they will see how it helps them in their business affairs and in their everyday life."

He has done a lot of thinking about how it will affect the workings of a country newspaper. "In this business of ours," he says, "the present irregular calendar results in endless waste effort because of the lack of standardized days and dates, the unequal number of days in a month, and the fact that years, according to the calendar, are total strangers to each other. It would take painful research to trace

days from dates, so readers are treated to a lot of sketchy reporting.

"Holidays falling in the middle of the week really upset newspaper mechanical departments, and they mess up the circulation department which depends largely on post offices, trains and buses, also topsy-turvy because of a split work-week. Meshed with retailing, the newspaper advertising department is thrown out of gear by a holiday-split week, and this is but a reflection of the confusion caused by the calendar in stores and industries.

"The scheduling of newspaper advertising under the present calendar is much like putting together a jigsaw puzzle which was never intended to be a profitable operation. Arranging staff vacations and pay for vacations in a newspaper plant is complexed by the calendar. It is obvious that every other business suffers the same calendar affliction, which spreads like poison ivy."

For the past forty years, Mr. Warren has watched the shift from steam power for presses to electric motors; from gas lighting to fluorescent tubes; from flat sheets of paper to rolls, from press speeds of 1,000 per hour to 60,000 per hour. Color cylinders were added ten years ago. Teletypes replaced Morse code. Machine-set type replaced hand-set. All these and many more innovations came because of the need for accomplishing more, with less effort and greater convenience.

"Meanwhile," he says, "the greatest

bargain in time and money saving goes a-begging. The World Calendar—standardized, accurate, regular—is free. The cost of the change-over would be infinitesimal—and no toll charge for its use.”

A farm paper published in an adjoining county recently had an editorial calling the attention of its readers to the importance of calendar reform. “Since the turn of the century,” it noted, “time has become a much more vital part of our daily living. Our homesteads are electrified and motorized, our barns and equipment are mechanized, our farms are operated by agricultural scientists whose schedules are no less exact than those of city factories. We have streamlined nearly everything except the calendar.”

Mr. Warren’s newspaper has itself done considerable streamlining. It appears today in small, compact format which means important savings on its newsprint bill, always a serious matter in newspaper operation. And today more than ever, with newsprint price at an all-time high. When you say newspapers you say newsprint, the thin, greyish sheets that carry the tale of the world’s happiness and ills to the far corners of the globe. When you say newsprint, you speak of the dark, northern forest, the sun and the wheeling earth, the long, long days of the brief, hot northern summer, the endless winters. For it is the calendar of the forest that rules the newspaper world.

During World War II, this world calendar—the growth calendar of the northern world—was disturbed by sudden, acute newsprint and lumber shortages. The human calendar which guides the transformation of spruce tree in northern Quebec into raw material for the molding of public opinion was thrown even more

seriously out of gear. Many European newsprint mills were not running. Upon Canada, which produces half the world’s newsprint, fell even more of the burden of production. Men went to war, not to logging camps. For lack of men, mills could be kept running only with the greatest difficulty.

In spite of the huge dislocations of a war economy, Canada during the years between 1939 and 1947 succeeded in putting her idle newsprint mill capacity to work to the tune of an increase of more than 1,400,000 tons. It is interesting to speculate on how many more tons might have rolled forth out of Canadian mills to feed the hungry presses of the world, if they had not had to struggle with the time and money-wasting inequities of our present irregular calendar. For it is in periods of extreme stress that every anachronism, whether in the machinery for making newsprint or in the machinery of living, shows up to its fullest disadvantage—the costliest of survivals from yesterday and the day before.

In that yesterday of the Hudson River country, the early 1800s, when our local almanac publisher, Andrew Beers, was bringing out his important annuals, he could be sure of plenty of paper. No great quantity was needed in the entire new nation in spite of political pamphleteering. And there were mills along the eastern seaboard—one just up the Hudson—making paper from rags and rye, oat and wheat straw. As settlement thrust rapidly into the West more and more was needed.

To the old Hudson River town of Saugerties came in 1827 the first modern newsprint machine. By 1830 cylinder machines making an endless roll of paper

had arrived. But the sudden speeding up the calendar of paper making—the greatest threat in history to the ancient growth calendar of our still vast forests—waited until after the Civil War. In 1867, in Curtisville, Massachusetts, was opened the first mill for making paper out of ground wood-pulp. American 30-page dailies were on their way, along with the destruction of our forests. Into the maw of the presses went magnificent pines, spruces, hemlocks.

Now that most of the saw-timber in the United States is gone, we are taking thought to the calendar of the trees. We are growing more and more of our own pulpwood, making more and more newsprint. We are all too slowly getting an all too small part of our woodlands on a "sustained yield" basis, with cutting in proportion to growth rate. We are breeding faster growing hybrids of poplar and pine. But we still must import 80 per cent of our newsprint. For we go on producing more and more of our major product—people and newspaper readers. The human calendar remains unchanged.

It is faster than the calendar of newsprint production, which still has to make up time. In certain heavily populated areas of the world—the Far East, Africa, South America—many millions of people are learning to read.

"In the present circumstances of paper supply, it would be impossible to furnish books, newspapers and publications to those who are now learning to read, were their number to increase by as little as 5 per cent," says the Director General of UNESCO. He hopes that the world's newsprint difficulties will in the end be solved by the use of bamboo, the enormously quick growing grass of the Far

East jungles, which yields a harvest every year. Then the growth calendar of a tropical grass rather than that of a northern hemlock may, by matching population increase, end the world's newsprint woes.

Recorders of change, knowing all about all the wars, what the vast majority of newspapers want is peace; and the proposed World Calendar, many of them feel, is a factor in the making of world peace. It would at the same time make peace for them and their foreign correspondents with all the varying calendars still in use. India has 30 different calendars. An American correspondent stationed at Istanbul, crossroads of many cultures, must reckon not only with the peculiarities of his own calendar but with those of Mohammedans, Armenians, Jews and the Eastern Orthodox Church. An English correspondent in Kashmir, who knew intimately the calendars of the Far East, had to wire home to learn the date of Easter.

Up our way more of us read the small local newspapers than large ones. But we have become in essence willy-nilly a suburb of one of the world's largest cities. We have lost our precious isolation and with it a good deal of our independence.

Like it or not, we have been turned into world citizens, in tune with the atomic age, if the atomic age can be said to carry a tune. When we and the newspapers which are our voices say the word, we shall have a new calendar—the proposed World Calendar—accurate, regular, time saving. We grew up in a simpler world. We know, more surely than our grandchildren, perhaps, that newspapers and calendars, war and peace, begin and end with US.

ROMAN QUARTERLY REVIEW

(From *Ephemerides Liturgicae* 1956, Rome)

Elisabeth ACHELIS, *Du temps et du calendrier*, Traduit de l'américain par Nissim Bernard. Buchet/Chastel, Corrêa 1955. In-16°, 166 pp.

LA questione del *nuovo* calendario va interessando ogni giorno più l'opinione pubblica. Sono stati escogitati e proposti vari movimenti e vari sistemi. Le linee convergono ora su un sistema unico, che ha il vantaggio di soddisfare a parecchi, se non a tutti i postulati degli altri, e, quel che vale di più, risolve le diverse esigenze in contrasto. La decisione, in ultima analisi spetterà al supremo consesso delle Nazioni. Quanto alla Chiesa, qualora i popoli si accordassero su una linea comune, e tenessero conto di alcune condizioni particolarmente delicate per la vita religiosa e il senso cristiano, "non mancherebbe di prendere in considerazione la questione," come è stato scritto di recente in un autorevole articolo dell'*Osserv. Romano*, riportato nella nostra rivista (cfr. *EL*, 1954, pp. 375-78; per lo "status quaestionis" generale e un'ampia bibliografia sull'argomento cfr. *EL*, 1950, 368-78).

La Dr. Achelis, benemerita Presidente della "The World Calendar Association International," espone il problema con chiarezza e precisione dal lato storico e dal lato tecnico. Si ha così un'informazione esauriente e sicura su di un problema complesso, ma interessante, la cui soluzione sembra sempre più opportuna, se non indispensabile per agevolare i rapporti nella vita civile dei popoli. Quanto alla vita religiosa e alla stessa liturgia della Chiesa non sembra che la fissazione del calendario e, come punto di partenza, della Pasqua, sarebbero di danno. Molti ritengono anzi che ne ricevessero non pochi vantaggi.

(signed) b.-[Fr. A. Bugnini, C.M.]

Direttore, *Ephemerides Liturgicae*]

TRANSLATION

Elisabeth ACHELIS, *Du temps et du calendrier (Of Time and the Calendar)*, translated from American by Nissim Bernard. Buchet/Chastel, Corrêa 1955. In-16°, 166 pp.

THE question of the *new* calendar is going to interest public opinion more and more. Various plans and systems have been worked out and proposed. The lines are now converging on a single system, which has the advantage of satisfying

a good number if not all the requirements of the others, and, what is more important, one which brings together the various opposing necessities. In the final analysis, the decision will be the concern of the supreme council of the Nations. As far as the Church is concerned, if the peoples should agree on a common plan and safeguard matters which touch closely religious life and the Christian conscience, "it will not fail to take the question into consideration," as was recently written in an authoritative article in the *Osservatore Romano*, reproduced in our publication (see *EL*, 1954, pp. 375-78; for the general subject-matter and a full bibliography see *EL*, 1950, 368-78).

Miss Achelis, President Emeritus of the "International World Calendar Association," describes the problem with clarity and precision from the historical and technical viewpoints. Here is thorough and accurate information about a complex but interesting problem, the solution of which seems more and more desirable, if not indispensable, for easing contacts between peoples in their every-day lives. As far as the religious life and even the liturgy of the Church are concerned, it would seem that the stabilizing of the calendar and, as a point of departure, of Easter, would not do any harm. There are many who would maintain that they would derive no little benefit from it.

(signed) b.-[Fr. A. Bugnini, C.M.]

Director, *Ephemerides Liturgicae*

OUR ILLOGICAL CALENDAR

(From *The Hartford Courant*, Hartford, Connecticut, 17 November 1955)

THE World Calendar Association, always glad to point out the inadequacy of our present calendar, has referred scornfully to the situation we faced last week. Banks were closed two extra days in most States, for Election Day on Tuesday and Veterans' Day on Friday—leaving only three days in the week on which the banks were open. "Business was thereby seriously restricted in its activities, and the smooth flow of production was interrupted," said the Association.

If we lived in a logical world the calendar would, of course, have been renovated once again long before this. It is illogical, whimsical, and often produces results like those pointed out by the Association. Unfortunately, there are a lot of people in the world who are addicted to illogic, who hate to see anything changed. There is also a group that might be described as the anti-progress group, which fight change just for the sake of it.

Actually, our present calendar is a continuing monument to the lethargy of the human race, which persists in depriving itself of regular long week-ends, with holidays falling on appropriately convenient days. And in this battle between the orderly and logical on the one side, and the sentimentalists and the *status quo* boys on the other, the latter seem to have far the better of it.

Consider how long it took to establish the principle of Daylight Saving Time. It is rather irritating to think that some unelected official in the State Department put the knife in the plan to get World Calendar Reform, through the United Nations. More serious even than the calendar is the fact that such a movement, affecting all of us, can be summarily dismissed from consideration by party or parties unknown.

THE WORLD CALENDAR

ROUND-THE-WORLD

By Colin Jackson

The following is the second installment of Professor Jackson's report on his visits this past summer with government officials, members of Affiliates and Committees of The World Calendar Association, International, and other interested groups, concerning The World Calendar.

IN my first article I dealt with the countries that I had visited and the discussions that I had held on calendar reform between Japan and Jordan. After Jordan my next stop was New Jerusalem and the Government of Israel. Officially their attitude remains intransigent. The view of the Government is that The World Calendar with its Worldsdays would interfere with the seven-day sequence of weeks. The week, the Government, somewhat erroneously I think, claims has always been of special religious significance to those of the Jewish faith.

However, I found that opposition in Israel to calendar reform is nothing like so solid as on the surface it might seem. For instance, the Progressive Party, the Unity of Labour Party and Mapam are all opposed in varying degrees to religious interference with a reformed secular calendar. The same attitude I found applied to Trade Union leaders and to university professors in, for instance, the field of Political Science.

The question which I discussed with Mr. Daniel Sher, the very able representative of calendar reform in Israel, was "how can we reduce this present official

hostility to The World Calendar?" We agreed that the Government in Israel is very sensitive to the attitude of members of the Jewish faith in such countries as the United States and Britain and, if it could be made obvious to the Government of Israel that the large Jewish population overseas is by no means unanimously opposed to calendar reform, then the attitude in New Jerusalem itself might change. It seems to me, therefore, that a great deal will need to be done to explain calendar reform to Jewish elements in the United States so that the present narrow-minded pressure by certain Jewish elements in America and Israel will be reduced. Undoubtedly it will be a long time before there is any pronounced swing towards calendar reform on the part of Israel. But I certainly believe, after my visit, that some progress in this direction could be made.

The country that I next visited was Turkey. My arrival in Istanbul was somewhat unfortunately timed as it coincided with the attack on Greek property by mob elements in the city. This made a calm and dispassionate discussion on calendar reform questions a little difficult.

However, I was fortunate enough to meet Professor I. A. Dereoglu, the Chairman of The World Calendar Association's Affiliate in Turkey. From the Professor I got an encouraging picture of the situation in this country. Turkey, a Moslem country, is fundamentally favorable to calendar reform although there are isolated pockets of opposition. Professor Dereoglu has many friends in the Turkish Foreign Ministry and there is no doubt that The World Calendar Association is well represented in this country. Professor Dereoglu volunteered to write on behalf of The World Calendar Affiliate in Turkey to Foreign Office officials and other Government leaders in Pakistan, Jordan, Syria and Lebanon. He said he would point out that Turkey, as a Moslem nation, was in favor of calendar reform and was able to reconcile their religious calendar with secular calendrical needs. I feel that such a move on the Professor's part could be most useful in weakening the opposition of Moslem countries to calendar reform. I know that Major General Iskander Mirza, the Governor General of Pakistan, will like to hear of Turkey's support for calendar reform. I also met in Istanbul Mr. Selahattin Turkman. Mr. Turkman is a very forthright and energetic young person with many contacts in Istanbul, and he has promised to work with Professor Dereoglu in furthering the cause of The World Calendar Association in Turkey.

After Turkey I went to Greece, carefully avoiding mention that I had just come from Istanbul! Despite the troubles over Cyprus, I received a very friendly welcome. I was unfortunate in not being able to meet Professor S. Plakidis who was in Dublin at that time attending a

conference of astronomers. Professor Plakidis has done great work for calendar reform in Greece; and when I went to see Mr. Stavros Roussos in the Greek Foreign Office I found the Government attitude most encouraging. Mr. Roussos, who deals with United Nations affairs, told me that, as a result of the discussions in ECOSOC and representation of The World Calendar Association, the Government had set up a committee at the University of Athens to study the whole question of Greece's attitude towards calendar reform. The committee, besides Professor Plakidis, would include representatives of the Mathematics and Political Science Departments of the University. The committee will hear the views of interested parties.

In connection with this, I was delighted to find what a broad-minded attitude the Greek Orthodox Church was adopting towards the question of calendar reform. The Church has said that whilst they are not necessarily 100 per cent on the side of The World Calendar they are willing to consider the whole question dispassionately and without prejudice. This was a most welcome relief from the more narrow-minded attitude of certain other religious groups that I had met on my tour. To sum up, I would say that Greece can be counted as a friend of calendar reform and is going ahead steadily with its own plans to support the Association.

My next stop was Rome, and there I went to the Italian Foreign Ministry to talk about calendar reform with the Marchese Cornaggio. The Marchese is looking after United Nations affairs as far as Italy is concerned although, of course, the country is not yet a member. I felt that, from the remarks of the

Marchese Cornaggio, Italy was prepared only to adopt a wait-and-see attitude towards calendar reform. I think the recent pronouncement by the Holy See indicating a sympathetic approach to The World Calendar has had an effect on the Italian Government's position. But I feel that the Vatican will have to be considerably more forthcoming in its support for The World Calendar before we can expect the Italian Government to move.

In Milan, I called in at the Headquarters of the Italian Committee of The World Calendar Association. Dr. Carlo Rossi, the Chairman, is an extremely busy man and I was unfortunately unable to meet him, but at any rate one can say in Italy that although *laissez-faire* seemed to be the national motto with regard to calendar reform, no direct opposition to such a change exists.

To sum up my tour, there is no doubt that wherever I went throughout Asia and Europe I found the question of calendar reform an important and live issue. It is an issue in which both governments and people are concerned and interested. And I feel quite sure that support for The World Calendar is increasing.

In all the Foreign Offices that I visited I found a generally sympathetic attitude towards The World Calendar Association and I think the basic idea of a World Calendar is accepted. What is needed now, I feel, is a new international effort to get this scheme put into practice and the focal point, undoubtedly, will be the United Nations. India has done so much in the last few years to carry forward the idea of The World Calendar. Now, however, I feel that she is looking for and calling for more help from other countries. Next year (1956) will be a par-

ticularly critical time with the issue coming up once again before ECOSOC, and I hope that those countries that have expressed themselves in favor of calendar reform will rally round India and The World Calendar Association.

The enemies of calendar reform are obvious and powerful. First there is, as always, indifference and apathy. Time and time again I came across people who said "Why bother to change things? Let's leave things as they are." People were always asking "what do we get out of all this?" And this is a question which, however material it may seem, must be answered.

Then there is religious opposition; and I feel here that one of the basic points of calendar reform, namely that it will not interfere with religious calendars and the sacred days of the various faiths, is not understood. Or, when it is understood, certain religious groups, I think, deliberately ignore it; or, worse still, conceal the fact from their supporters.

Of course, religious opposition to calendar reform can be opposed only with great care. We cannot have intolerance fighting intolerance. Religious feelings everywhere naturally are most sensitive.

Apathy will have to be fought by traditional means; that is by interest, enthusiasm and determination.

From my tour I am convinced that The World Calendar can and will come into effect. It will do so because in all countries and amongst all religions there are now enough enlightened and far-seeing citizens of the world working together who believe that calendar reform is a cause worth fighting for and who believe that victory will be yet another milestone in the history of mankind.

PROGRESS AT GENEVA

By James Avery Joyce

The author, who spent three months in Geneva last summer working at the International Labour Office, is the Honorary Secretary of the British Section of The World Calendar Association, International, and was a Parliamentary Candidate at the recent British General Election. He is spending the winter in the United States as a Consultant at the United Nations General Assembly and as a lecturer for the American Friends Service Committee.

THE challenge of Geneva has never been more insistent than this last summer, when Geneva again took up its dual role of peacemaker and pacemaker for the world's national governments.

Following one of the most fruitful sessions of the Economic and Social Council in July, the Big Four Conference and the Atomic Scientists' Conference crowned a season of international cooperation and progress towards peace. Whatever the obstacles still to be surmounted, "Geneva 1955" has marked decisively a turning-point in the history of the human race.

This beautiful Swiss city—whose motto, *Post Tenebras Lux*, typifies humanity's age-long struggle through the darkness of ignorance to the light of knowledge—has never looked more resplendent than it did this summer, between its deep blue lake and its high snow-capped mountains. Hotels were crammed to their limits with delegates, officials and journalists (the Atomic Scientists' Conference alone brought 8,000 delegates and staff) and every corner of the huge sprawling "Peace Palace" was crammed with activity, without arresting for a moment any of those multifarious services for the

benefit of humanity which proceed, day by day, under the aegis of the U.N.'s European Office and the important Specialized Agencies which now have their Headquarters in Geneva.

The summer meeting of ECOSOC is generally the longest of the regular sessions and the importance of the agenda items brings the leading economic and technical spokesmen of the governments to Geneva. This was, in a way, an "off-season" for the calendar cause—as it is due to come up again on ECOSOC's agenda next spring—but the present writer was able to have a number of detailed discussions with at least two dozen leading delegates and government advisers, and to speak on behalf of The World Calendar at several conferences of the Non-Governmental Organizations. In addition, a number of informal and friendly talks behind the scenes with representatives of the organizations—some favorable to the cause and others hostile—gave opportunity of correcting misconceptions about plans for the future, while looking forward to prospects for advancing the calendar cause next spring.

Everybody knows that opposition to calendar reform is expressed by Jewry—

joined by the small Christian sect of Seventh-Day Adventists. Progress at the United Nations level is hindered by this opposition, which is well-organized and coordinated. At least seven or eight Jewish organizations have, as has The World Calendar Association, International, the prized privilege of Consultative Status with ECOSOC.

In some of these organizations the present writer has many Jewish colleagues, fellow-champions in good causes the world over. It is, therefore, regrettable that, on this particular issue, when it would seem there can be no difference of opinion on what sort of *civil* calendar is best for the modern world, our Jewish friends should seek to prevent, by means of purely religious or doctrinal arguments, a reform which has nothing to do with religious belief, as such, but is so plainly directed to economic, social, scientific, educational and administrative ends.

It was not without significance at Geneva last summer that the "Jewish opposition" (to give it a name) was obviously impressed with the continuing progress which the calendar plan, sponsored by India, has made at the U.N. in the last three years, notwithstanding the opposition. It has to be recognized that the Jewish groups have a tough and uphill fight to conduct in the field of human rights and in many other spheres of constructive world cooperation and in these they need every ounce of the support they can muster, both from friendly governments and N.G.O.'s. The World Calendar Association, International, looks on such humanitarian endeavors with the utmost goodwill and desires their success.

As the calendar question has moved

steadily forward, nationally and internationally, towards some form of world-wide action, my strong impression has been this summer that our opponents would not wish to risk overt defeat. Under the circumstances, the Association—backed by a growing number of supporting governments, who would like to see favorable U.N. action—may well adapt its immediate strategy and longer-term educational program to a "step-by-step" procedure. Directly in line with the representations of India, the most sensible course for all would be a careful inter-governmental study of calendar reform in its wider-world aspects. Such a procedure would not injure religious propensities, but would set the frame within which all relevant issues could be impartially and sympathetically considered.

The wisdom of such a policy was fully borne out by a series of important interviews I had with the Indian and other delegations. Since India's success at ECOSOC's eighteenth session in 1954, the preliminary viewpoints of over forty governments have reached the Indian delegation, either through the U.N. or directly. As a result, India's main course of future action will doubtless be along these lines:

- (a) Maintain the calendar item on ECOSOC's agenda, until positive action is decided;
- (b) Press for setting-up of some kind of international enquiry under the United Nations, if possible in the form of an inter-governmental committee to report back to ECOSOC at a later session.

In this policy, India looks for support from the International Association

on the U.N. and national levels. The Indians now, to a greater extent than initially, recognize calendar reform as a long-term plan and that opposition is not easily overcome. But they believe that progress can continue from one stage to another. Hence their decision at the last spring session in New York to request postponement of the item until the spring 1956 session. If there can be established under the U.N. an impartial and thorough-going enquiry, as outlined in (b) above—all viewpoints being considered—the foundation will be laid for the next advance.

This was equally the view of the Yugoslav delegation, who so strongly backed India at the eighteenth session. It is encouraging to note, by the way, that a Calendar Reform Committee is now under formation in Yugoslavia, and several well-known public men have indicated their practical interest. It is not desirable in a published article to go into detail in such matters; but I can readily confirm from my informal talks in Geneva with several members of the delegation, that (quoting from their official reply to the U.N. Secretary-General earlier this year):

“the Government of the Federal People’s Republic of Yugoslavia is of the opinion that it would be desirable that the United Nations continues to examine and study the question of World Calendar Reform with a view to co-

ordinating the existing attitudes and finding a satisfactory solution.”

The Czech delegation confirmed the news, which had gained wide publicity earlier in the year, that the Czech Government were in favor of The World Calendar and would, in principle, be prepared to put this particular plan into effect, if other countries did likewise. It was, in fact, encouraging to learn at first hand, from one of the leading members of the delegation, how successfully, over a number of years, had been the application to several major industries in Czechoslovakia of a 12-months fixed calendar, not unlike The World Calendar, for accounting and general administrative purposes.

In fact, it became clear from similar discussions I had with delegates that there existed an unmistakable willingness in the highly industrialized countries of Europe to favor international action, as proposed by India. But, at the same time, it was recognized that the advance had to cover a wide front and that a clearer indication was awaited from, especially, the “Catholic” countries, so that the majority could move forward together.

In view of the more liberal attitude revealed at ECOSOC’s eighteenth session, appearing in *L’Osservatore Romano*, following as it did so closely on the pronouncement on calendar reform in general, the Association can well look to the future with firm assurance.

THE WORLD CALENDAR

*By the Reverend Father Giuseppe G. Tursi, R.C.J.**

Translated and abridged from the Italian in Natale de Italia e la Voce del popolo, San Francisco, California

THE "Dance of the Calendars" dominates the beginning and the end of every year. That is why we are deliberately choosing a period of calm [December], in which to introduce to our readers a calendar not actually in existence as yet, but which will probably enter our lives before very long. It will be the "King of Calendars"—the true World Calendar.

The calendar, as we know, is a special method of calculating the times connected with the religious and civil customs of various peoples. We also know that numerous calendars are in existence: the Jewish, Mohammedan, Chinese, etc. Ours is called the Julian-Gregorian or simply the Gregorian calendar. It has been handed down to us from ancient Rome after having undergone certain revisions. Julius Caesar revised it in B.C. 45; Pope Gregory XIII revised it a second time in A.D. 1582. Pope Gregory's reform was immediately adopted by the Catholic countries and by degrees the Protestant countries. Russia adopted it after the revolution in 1918.

The Gregorian calendar is excellent from the astronomical point of view.

*In this article Father Tursi discusses the stabilization of Easter. The World Calendar Association suggests 8 April for Easter, as nearest the supposed historical date, 9 April, but believes this is a matter for the decision of Church authorities.

However, it contains certain defects from another angle, especially in our times, and these make another reform necessary. These defects are: (1) its instability, which causes some of its elements to change from one year to the other, and (2) its lack of uniformity of structure.

This lack of uniformity is shown chiefly by the manner in which the months are irregularly composed of periods of thirty and thirty-one days; one of them even has twenty-eight days. Its instability, however, is still more serious. One of the consequences (not the gravest it is true) is that at the end of each year we have to throw away the old calendar and procure a new one. At present each date of a month falls, let us say, first on a Sunday, then on a Monday, then on a Tuesday and so on in each successive year. Easter, the Queen of Feasts, may fall on 35 different dates from 22 March to 25 April inclusively. As we know, the other Feasts or movable commemorative days depend on Easter (Ash Wednesday, Holy Week, Ascension Day and Pentecost, etc.)

All this disorder is out of harmony with the prevalent pattern, a pattern which, especially in countries like America, has been followed and continues to be followed more and more by the predominating activities of the times in industry, finance, commerce, administration

of courts and schools, etc. Such activities tend to proceed with regularity, almost mechanically, but they are disturbed quite a little in their evolution by the exigencies of the present calendar. Thus adjustments are necessary which vary from one time to another; for example, the date on which school opens depends on the date on which Easter falls and the day on which Christmas and New Year's Day fall. This entails many calculations and many complicated situations in practical life. Finally, the burden which the present calendar imposes on humanity with its annual expense is by no means negligible.

Reform Plans

The problem of reform of the calendar is not new: it has been discussed for at least two or three centuries. With the passing of time, as usually happens, it has become increasingly acute and it is particularly so in our time; this and other indications convince us that the solution is near. Through the years plans for reform have been multiplied, but all of them have the one aim of making the calendar itself more orderly and more or less invariable from one year to the other or, even, to make it perpetual.

In order to achieve more or less complete invariability of the calendar, all these plans fix Easter on one of the Sundays of April (and the other Movable Feasts on their proper date as dependent on Easter) and they use expedients of various types to fix the days of the week in conjunction with the dates of the month. The present variation of the days of the week for a constant date of a month is due to the fact that the year consists of 52 weeks plus one day.

If this extra day did not exist, there would be no such change. Here then are the various expedients: (a) to make that one day into an extra day independent of the days of the week and the dates of the month (that is to say neither a Sunday nor a Monday, etc.); (b) to ignore it for six years and then (together with the extra day for leap year) to add a whole week to the year (the intercalary week); (c) to disregard the day until a number of days equal to one month is reached, and then (every 25 years) to add a whole month to the year (intercalary month).

The systems for achieving regularity of the calendar are reduced to only three: (a) a more logical arrangement of the months, leaving everything else more or less as it is; (b) reduction of all months to 30 days substituting the decade (period of ten days) for the week (3 decades exactly per month) and counting the 5 days remaining as 5 extra holidays to be spread throughout the year; and (c) reduction of all months to a regular length of 28 days or exactly four weeks and establishing a year of 13 months.

This last mentioned system was proposed by a certain Urban of Maryland who published it in 1745; it was popularized by the French philosopher Auguste Comte (1798-1857) in one of his works, and it had many supporters because of its great regularity (all months symmetrical and equal). The League of Nations rejected it definitely, chiefly because a 13-month year ruined the neat and convenient combination of months two by two (*bimestri*), three by three (*trimestri*), four by four (*quadrimestri*) and so on.

The Superior Plan

Today the supporters have turned to the system of Abbot Marco Mastrofini, an Italian who published his plan in Rome in 1834. This system is promoted by The World Calendar Association, whose headquarters are in New York, and is now before the United Nations. It is the simplest and most perfect plan among them all: in other words it is "simply perfect." [See inside front cover of this *Journal*].

It is wonderful, almost unbelievable, to find so many excellent characteristics as there are in a calendar systematized in this way—all the more so since the results are attained in such a simple manner and with so very few adaptations of the present calendar. The same cannot be said for the other plans, which, though, on the one hand, they regularize the calendar, on the other hand, they upset it; in addition, they do not entirely accomplish their aim. . . .

Results of the Reform

With the calendar thus regularized and constant, as the years succeed each other everything becomes easier in our lives: calculations are ready-reckoned, many problems are solved; planning will be easier, coordination more complete and rapid. Many arrangements which under present conditions sometimes require special study will no longer need this, and many things which are variable as to their established time and duration would then have stable time and duration, and would proceed accordingly with no need of occasional special adjustment, as is now the case because of a lack of uniformity in their recurrence.

Then long-term activities or those of a periodic or continuous nature (as, for example, schools and their opening and closing, Christmas and Easter holidays, examinations, etc.) would be planned along the lines most convenient for their development in conjunction with the calendar; their evolution could continue undisturbed until it was desirable to make new provisions. Thus everything would be regular and symmetrical in life. Then, too, items of general interest connected with the more important activities could be indicated in the calendar. For example, it could show when schools open, when Christmas holidays begin and end, when exams take place, etc.

Those Feasts now fixed on a certain date would also be fixed on a certain day of the week (Christmas, for example, would be on a Monday, the Assumption on 15 August would be on a Wednesday etc.) and those which are now fixed on a certain day of the week would also be fixed on a certain date of the month; for example, Labor Day would fall on 4 September, Mother's Day on 12 May, etc. Under the heading of pleasant arrangements, I may mention here that Americans using the new calendar could dream up some magnificent week-ends which would be made longer than usual by the addition of certain holidays, for which a special date has no significance, as is now the case with Labor Day. The Feasts and movable commemorative days of the Paschal cycle would be arranged as follows: Septuagesima Sunday 12 February, Ash Wednesday, the beginning of Lent, 29 February, Palm Sunday 8 April, Easter 15 April, Ascension Day 23 May, Pentecost 3 June.

Another result would be that a calen-

dar would become a piece of merchandise in business like any other item, one we would buy when we felt like it or would keep until worn out. Incidentally it would not wear out so fast, it would not have to be consulted so often, and eventually we would know it by heart. It could also be used for the *Ordinario*, which is the special calendar priests use for their daily arranging of Mass and the Offices.

Comparison with the Present Calendar

The future calendar, for obvious reasons, will not coincide completely with the present one. For instance, there will be dates which do not exist, such as 30 February, 31 April, and others will disappear such as 31 March, 31 May, etc. The month of February will have 30 days, as will the majority of the months, and thus two days of March will go over to February. For this reason the 18th of March in the new arrangement will correspond to the present 20th of March. This difference of two days occurs for little more than two months, and a difference of one day occurs for about four months; in all the others, that is to say a good half, the dates will coincide. As we can see, the difference in this respect between the old and the new calendar is very slight, and this is very important for history and for the dates in our personal life; for example, the date of our birth: here we have another great advantage of this revision plan. Think what it would be in the case of the other plans! And so, the transition from the old to the new style, once accomplished, would be almost imperceptible to man.

Because of this slight difference, the beginning of the seasons (which at present are 21 March, 21 June, 23 September and 21 December) will then be 19 March (Spring), 20 June (Summer), 23 September (Autumn), and 21 December (Winter); it is well established that the seasons are at fixed times of the year.

The month of February will enter the ranks of the regular months like all the rest; finally justice will be done to it after so many centuries of privation and patient waiting.

The famous rhyme, "Thirty days hath September, etc.," will no longer have any meaning. Then we shall only have to learn the months with 31 days.

The Question of Easter

The future calendar arranges for a fixed Easter Day on one definite date. But everyone knows that the determining of Easter's date for Catholics depends solely on the Pope. The question of Easter, moreover, is a serious matter. At present the celebration of the Paschal Feast depends on the course of the moon (this is the reason for its extreme divergence from year to year). It was according to this that the Feast of Passover had already been determined by the Hebrews. (However, the Paschal Feast of the Christians does not correspond with that of the Jews.) Easter is set for the Sunday following the first full moon of spring; this was the custom followed by the Apostles and solemnly consecrated by the Church. The Holy See, it is true, has declared (though not very recently) that "there are no dogmatic reasons which oppose the reform of the Calendar": but we do

not know how far this change can be pushed in actual fact. (For example, it is unthinkable that it should reach the point of allowing the substitution of the ten-day week, which moreover would be both burdensome and exhausting.) However, it is not improbable that the Holy See would accept the reform for all the rest but not for Easter and the Feasts which depend on it. This would not be any great evil and the reform would still be a fine thing. Easter really does not greatly interfere with human affairs because (1) it rests almost exclusively within the religious field, (2) it always falls on a Sunday, (3) in the reformed calendar, instead of its possibly falling on 35 different dates, it could come only on 5, on one of the Sundays 24 March, 1, 8, 15 and 22 April. Nor would it be necessary on this account to reprint the calendar year by year; a little sheet with the list of movable feasts would be sufficient. As the moon will always be a creature which remains rebellious towards any reform, it would be necessary to print a sheet indicating the four monthly phases of the moon (New Moon, First Quarter, Full Moon, Last Quarter), for the sake of lovers.

Conclusion

Faced with the perfection and the great advantages of The World Calendar plan (even if Easter is not fixed), we experience a feeling of annoyance—we are annoyed that it has not already become the current calendar. Sooner or later though, it will. In the modern age, when the world is dominated by the ma-

chine, when everything tends to be standardized and to assume a mechanical appearance and stride, the calendar, too, so intimately bound up with human life, cannot fail to become somewhat mechanical, and to embrace the mechanics as its own standard. With The World Calendar, a more basic standard will be stamped on all human activity; and the men of today will be happy with this and will function in the greatest ease. We do not know, however, whether such monotony might not end by being wearisome, by tending towards exasperation.* But man will find variety in some other more important manner, for variety always seems to give pleasure.

The World Calendar Association had indicated that the time for its adoption should be 1956, which begins on a Sunday and is a leap year. Will the Powers in the United Nations, at odds on so many issues, succeed in reaching agreement on this question? We wish them good luck. If nothing is done in 1956 the next year which begins with a Sunday will be 1961.

There only remains for us to offer special prayers for the adoption of The World Calendar. The solution of the difficult problem, as proposed, is pleasing, for the solution is ideal, complete, simple, destined perhaps to become a second Columbus' egg. The Abbot Marco Mas-trofini of Montecompatri near Rome—scholar, historian, philosopher, scientist, Roman Catholic priest—proves himself a true genius.

Editor's Note: There is an orderly variation among the three months in every quarter year avoiding monotony.

OCCASIONAL LEAP-WEEKS NOT PRACTICAL

RELIGIOUS opposition to a perpetual calendar like The World Calendar is limited almost entirely to Orthodox and Conservative Jewry and Seventh-Day Adventists. These groups object to the particular placement of the two days necessary to stabilize the calendar and, at the same time, to equate the calendar with the solar year. The two days are Worldday, introduced at the end of every year, and Leapyear Day, introduced every fourth mid-year. These additions, according to the religious opposition, by interrupting the sequence of the seven-day week, violate "a most sacred institution."

It is a mooted question that the sequence of the seven-day week is "a most sacred institution." Research reveals that the uninterrupted sequence of the seven-day week arose fairly late in Jewish history—during the Babylonian captivity—as a means of solidifying the Jews, preventing them from being assimilated by their captors.

Nevertheless, in an effort, not only to preserve this particular sectarian tradition, but also to impose it upon the entire world, these religious groups are urging several schemes that would nullify a simpler, stabilized and comparable calendar, the purpose of the civil and scientific reform movement now before the United Nations Economic and Social Council.

One of these schemes saves up the days beyond 364 until an additional week is available. This week is then added to the year. Such a "leap-week" plan, producing years varying in length from 364 to 371 to 378 days, was rejected by the League of Nations on the ground it further complicates our already confused calendar.

Another and more recent scheme, known as the Jubilee Calendar, has been described as follows:

"A simple examination of the calendar situation will show that there are 497 'extra' days in every 400-year cycle, which 'interfere' with the simple working of a perpetual calendar—the 365th day each year and the 97 days of the leap years (every 4th year, except the 100th year which is not divisible also by 400). Four hundred and ninety seven days are precisely 71 weeks, so that if a reasonable system of allocating 71 weeks within the 400-year period, outside the system of months, were devised we would secure precisely the same good results demanded by calendar reform, without antagonizing any one of the religious groups. By removing this objection on the part of various denominations to the effect that they may be profaning the 'Lord's Day,' we must necessarily speed along the solution of the problem and the general acceptance by the United Nations of this truly epoch making adoption of a universal calendar.

"And yet, this great reform requires no drastic change from the present calendar—indeed it demands merely an acceptance of a leap year based upon an extra week rather than upon an extra month or day. The 71 (497 days) 'extra weeks' may be so

distributed over the 400 year period as to cause the least inconvenience—even less than the leap years in the current calendar. Fifty years will be taken as the norm, and every six years within that period would contain a leap year week as would the 50th year (when the counting of six year period would recommence) except that in the 400th year (after eight cycles of fifty (50) years) there would be *no* leap year week, giving us exactly 71 leap year weeks within the norm. Otherwise, the calendar would follow unwaveringly the set-up of four months with 31 days and eight months with 30 days, each month [quarter] beginning with the same day of the week as provided for in the proposed universal calendar, while the week would be preserved as a unit throughout recorded history. With all opposition from religious groups thereby successfully surmounted, there is good reason to believe that Calendar Reform will become an established fact through United Nations action without unnecessary delay.”

Professor Cecil L. Woods of California, who at one time spent six years in China as a Seventh-Day Adventist missionary, considers another type of Jubilee Calendar:

He proposes a Jubilee Calendar wherein 71 intercalary weeks are inserted in the calendar within a period of 400 years according to the following rule: A week is intercalated between the last of December and the first of January at the beginning of years which are divisible by five, except those ending in 25 or 75 or divisible by 400.

He suggests that the inserted week be known as a “Jubilee Week” with dates 1 Jubilee . . . through 7 Jubilee, and so on. The weeks are to retain the regular order of Sunday, Monday, through Saturday. Each Jubilee week is to be considered as the *first week in any Jubilee year*, but not to be counted as a part of any month or of any quarter-year. He further suggests that records of Jubilee weeks be kept separately. The rest of the year is to be comparable to all other years of 364 days. This Jubilee week always precedes the first of January and is the first week of that year but not to be counted as a part of January.

The intercalation of 71 weeks in 400 years would make the average year of the Jubilee Calendar 365.2425 days, by which method this calendar would keep the same scientific or astronomical accuracy as the Gregorian calendar within a period of 400 years.

Are these plans simple and practical? Two of the major defects are, first, the disregard of the *annual seasons*, integral parts of the calendar, and, secondly, the exclusive emphasis upon one particular time-unit—the week—at the expense of the other time-periods of which the calendar is composed.

A notable statistician points out: In forecasting business rates we use curves of normal seasonal variations and custom requirements. . . . They would have to be adjusted each year under the Jubilee Calendar to correct for the change in seasons.”

It is a striking fact that, in the two suggested 400-year cycles of the Jubilee Calendar, the required 400 years since the adoption of the Gregorian reform have not as yet been reached. If we are to reckon the date of adoption 1582 with 1956, for example, a period of 400 Gregorian years is short by 26 years—a quarter of a century. This gives an idea of what the Jubilee Calendar would mean. On this basis alone these propositions are impractical—as impractical as the Jewish religious calendar is in the civil and secular lives of their people.

Mr. Walter Mitchell, Jr., former managing director of the Controllers Institute of America, who has completed a business-industry study on calendar reform states that, “every five or six tax years must contain a 53d week. Comparisons with 52 weeks can therefore be at least 2 per cent confusing. . . .” The

proposed World Calendar would eliminate the necessity now confronting all "week-unit" procedures—"the insertion of a confusing 53d week every fifth or sixth year."

Certainly occasional leap weeks and Jubilee Calendars are not the solution. The ancient astronomer Sosigenes realized that the shorter the periods of intercalation—one or two days—the better and easier it would be for the recording and measuring of Time.

We have here a striking example how far Orthodox groups will go in order to maintain their own particular traditional idea. Self-interest blinds them to the far greater and wider concept of the calendar. They do not understand its universality. They do not realize that the civil calendar belongs alike to Catholic and Protestant Christian, to Jew and Seventh-Day Adventist, to Moslem and Hindu. The World Calendar is actually a universal system of Time in arrangement, purpose, scope and usage.

St. Paul in I Corinthians, Chapter 12, speaks of the diversities of gifts, differences of administration and varieties of operations, yet all with the same spirit. Likewise there is no schism in the human body but all the members have the same care and regard one for another toward maintaining a whole and perfect human being.

In the realm of Time, The World Calendar also is one complete system where in the different time-units coordinate perfectly in the year, each functioning in its own particular way, yet all agreeing at specific intervals at the close of every quarter-year. No specialization is directed to any one particular unit.

The new world holidays—Worldsday

and Leapyear Day—are dedicated to the unity and brotherhood of peoples irrespective of differences, nationalities and creeds. Shall an alleged tradition of the few act as a deterrent to the many and deprive man of their universal and social advantages?

The former Assistant General Secretary of The World Council of Churches, Dr. Henry Smith Leiper, in his forthright article, "Come Now, and Let Us Reason Together," wrote:

"Shall The World Calendar, which stabilizes our days along scientific and mathematical lines, be denied to the world because of the opposition of minority groups? Must all our days continue to wander throughout the calendar in order to prevent one wandering day for the opposition of the minority because of their own particular religion?"*

It has been said "Let not the holy and sacred sabbath be enslaved but remain free, unhampered and unfettered by man-made traditions."

Holy Scripture frowns upon making the day subject to the letter of the law; it is the spiritual significance that is of value.

The great prophet Isaiah writes: "Bring no more vain oblations . . . the new moons [months] and sabbaths, the calling of assemblies, I cannot away with. . . . Your new moons and your appointed feasts my soul hateth: they are a trouble unto me. . . ."

**The American Jewish Year Book*, the Tercentenary Volume, 1955, states that the Jewish population is one-half of 1 per cent of the total world population and that the United States has 5,000,000 and Israel 1,488,470 Jews. In 1953, the Seventh-Day Adventists reported a membership of 807,000 of which 265,000 are in the United States.

Jesus of Nazareth declared: "The sabbath was made for man and not man for the sabbath."

From St. Paul we hear these words: "Let no man therefore judge you in meat, or in drink, or in respect of an holyday, or of the new moon, or of the sabbath days: which are a shadow of things to come." In Romans are found these ringing words: "that we should serve in newness of spirit, and not in the oldness of the letter," and in Corinthians the "letter killeth, but the spirit giveth life."

Here are words of admonition not to tie the calendar to any religious and sectarian bias but to keep it free and true to its scientific and astronomical origin whereby it can best serve the civil, social and economic activities of life. The spiritual need is being fulfilled by the observance of the various religious days of worship. Thus a harmonious balance is recognized and established.

It is believed that opposition is temporary and will quietly disappear when fuller information and understanding are had which will clarify the reform. By recognizing the value of observing the Sabbath always on the *seventh* day of every new year, the Sabbath would become strengthened and enhanced. The week itself is most carefully upheld; the familiar order of weekdays from Sunday the *first* day through Saturday the *seventh* day remains unchanged.

When Standard Time was proposed

Orthodox groups vigorously opposed it as interfering with "God's Time" but after adoption opposition disappeared.

Mankind will go far with this new and ordered stable calendar in daily use. It will help to unite nations and races of men in a freer service to mankind and permit more peaceful living in a spirit of cooperation and good will. The foundation and continuation of life in its many activities are based on inter-relationship, inter-dependence and inter-communication.

The world today is living in fear of the bomb—no matter what kind. Yet atomic power is vitally compelling in its vast energizing force. There is a movement now to pool fissionable material throughout the world for constructive and beneficial use. A forerunner of this stupendous, yet unknown, potential may be the universal observance of Worldsdays and Leapyear Day symbolized as "*dynamic days for peace*." From their far-reaching and irresistible influence good is sure to flow, beckoning man forward and upward to brighter, happier days.

Jawaharlal Nehru has said: "Every step might well be judged according to whether it increases or decreases the element of fear in the world. If there is less fear then there is more reasoned thinking, there is more understanding."

Pioneers of the forward look, of vision, of faith and of courage are the bulwarks of an ever enlightened civilization—*Where there is no vision, the people perish.*

SUMMARY OF WORLD-WIDE ACTIVITIES

By Harriet A. Lillie

Former Secretary-Treasurer, The World Calendar Association, International

REPORTS of Affiliates and Committees of The World Calendar Association, International, presented at the Ninth Annual Meeting 16 January 1956, reflect the world-wide interest in and need for calendar reform.

Affiliates represented at the meeting were: Argentina, Australia, Belgium, Canada, Cuba, France, Greece, Japan, Mexico, New Zealand, Norway, The Philippines, United Kingdom, United States and Uruguay. Reports were also received from Germany, Israel, Italy, Pakistan and Venezuela.

The President, in opening the meeting, welcomed Mr. A. J. Hills of Canada, the Assistant Director General and Chairman of the Canadian Affiliate; Mr. James Avery Joyce, Honorary Secretary of the British Section, who represented Great Britain and Australia; and Mr. John A. Lyon, Legal Counsel of the Association, who represented the Affiliates who were not able to be present in person.

The President then stated: "This Ninth Annual Meeting of The World Calendar Association, International, is very significant in that it marks important changes for discussion and agreement. Thus, before approaching the actual business of the meeting, I wish to make a few preliminary remarks.

"As already known to Affiliates, I gave notice at the end of April (1955) of my strong conviction that, as calendar reform and The World Calendar were now before the United Nations, the time had arrived when the Association might withdraw from its activities in favor of the United Nations. The United Nations, I feel, is best equipped to deal with so world-wide a subject as it is in an authoritative and international position to study impartially the subject and to recommend the best civil calendar for world use.

"At that time I also informed the Affiliates that, this progressive advancement having been made, the United States Incorporated Association would withdraw from the International Association at the close of this meeting and would be dissolved. Thus after twenty-five years of activity, this parent association is being discontinued at the end of April, 1956.

"It is with regret that I see the passing of an Association which has been the means of directing the attention of the world to the urgent need for a calendar better fitting our time and the future, yet there is coupled with it a sense of satisfaction that with calendar reform, now before the United Nations, I will be able to work more effectively and freely in the United States and in an advisory capacity when desired.

"There has been general agreement as to the closing of the Incorporated Asso-

ciation, but continuance of the International Association has been desired by a number of Affiliates who felt such an association was still essential and that it was important to retain the Consultative Status in ECOSOC.

"To meet this demand, I suggested Mr. Hills for President, which was also proposed by the British Section and Australia before Mr. Hills had mentioned it to them. Thus the nomination has a pleasant mutuality and it is expected that Mr. Hills will be unanimously elected President of the International World Calendar Association with headquarters being transferred to Ottawa, if that Association is by vote at this meeting to be continued.

"This change in presidency and locality will, I feel, be for the best of the cause. Thus it is with particular satisfaction that I visualize this international work being carried on in Canada."

Thereupon Mr. Hills moved the following tribute to Miss Achelis, which was unanimously approved:

"This meeting wishes to record its deep appreciation of the devoted service given to the cause of calendar reform by Miss Elisabeth Achelis, now to our great regret retiring from the presidency of The World Calendar Association, International. Through her zeal, devotion and untiring energy, consistently maintained for more than twenty-five years, The World Calendar has been put before the governments of members and non-members of the United Nations by its Economic and Social Council. We feel that all who have assisted Miss Achelis in her endeavors to give the world an improved calendar will wish to join with us in this tribute to her work. They will also desire to express the hope that through the united efforts of calendar reformers, inspired by Miss Achelis' fine example, the objective for which Miss Achelis has worked so long and ardently will be achieved, to her lasting credit and renown so that she herself will have the satisfaction of seeing The World Calendar accepted as the civil calendar for world-wide use. It is gratifying to us, her associates, that Miss Achelis accepts the nomination in connection with the organization as President Emeritus—or will accept it."

The Meeting voted to reorganize The World Calendar Association, International, under the new name, "International World Calendar Association." Mr. A. J. Hills of Canada was elected President and Miss Elisabeth Achelis President Emeritus, with headquarters of the Association being transferred to Ottawa. Other officers elected subject to their approval were: Sir Harold Spencer Jones of the United Kingdom as Honorary President; Dr. M. N. Saha of India, Dr. A. D. Ross of Australia, and Dr. Ricardo J. Alfaro of Panama, as Vice Presidents.

Detailed reports, submitted by the affiliated organizations, included the following highlights:

Argentina. The chaotic state under which Argentina has lived these last twelve years, under which no simple propaganda has been possible, is known universally. The Chairman, the Reverend Father Juan V. Monticelli, further stated that the only means for advancing the movement in Argentina was through the distribution of the *Journal* and at the present time there was no possibility of approaching official circles. He stressed the Affiliate's sincere adherence to the cause and expressed regret at the President's retirement.

Australia. The activities of the Australian Affiliate for the year 1955 were confined to consolidating their position throughout Australia, completing their organization in each State by additional appointments to the Committee where necessary, and utilizing every opportunity to extend their influence—particularly in commercial, professional and scientific spheres.

Valuable publicity was given the movement through national newspapers, the Australian edition of *Reader's Digest* and trade journals. *The Journal of the Retail Traders' Association* has been especially helpful. In the October issue, they again affirmed their support as follows: "Council of The Retail Traders' Association of N.S.W. gives full support to adoption of The World Calendar, believing that the complexities of modern living have left the present calendar obsolete, and that The World Calendar proposed would be a reform of universal significance." Contact with religious leaders and the Trade Union Movement was maintained.

The Australian Affiliate concluded that it "is now fully 'geared' to take advantage of the forward movement which we confidently anticipate will take place in this part of the world in the months to come. We can be depended upon to do our best in forwarding the interests and establishment of The World Calendar in Australia; despite opposition, indifference and the attitude of governments we shall continue our efforts for reform."

Brazil. The Affiliate has been without a chairman since the death of Rear Admiral Radler de Aquino in 1953. However, Mr. H. Saville Dodd of Sao Paulo, who has been an advocate of The World Calendar for some years, has recently expressed an interest in forming a new committee and becoming its chairman.

Canada. Work on behalf of the International Association made more demands on the Canadian Chairman than in previous years. Duties as Assistant Director General, connected with the decision of the Economic and Social Council of the United Nations to request member and non-member nations to study and send in their views on the desirability of calendar reform, occasioned a number of visits to headquarters in New York.

There were the usual addresses to various organizations, notably The Inner Wheel at Montreal on 18 January; the preparation of articles for publication, assisting with the editorial work for the *Journal of Calendar Reform*, interviews with government officers, particularly in connection with the reply of Canada to the Secretary-General. This reply was favorable to a study of the subject under the auspices of ECOSOC.

The Chairman thought it proper to get in touch with the representatives in Canada of nations from which no reply had been received by the Secretary-General on the calendar reform item, informing them of Canada's reply, with reference to support for the movement in Canada, and expressing the hope that the information would be forwarded to their governments.

The Chairman had the pleasure of meeting in New York Sir Harold Spencer Jones, Britain's Astronomer Royal. There were also conferences in New York with Mr. James Avery Joyce of the British Section, and with Mr. J. Royden Gilley in Toronto.

The Canadian Chamber of Commerce (the national voluntary federation of more than 700 Boards of Trade and Chambers of Commerce in all of Canada's ten provinces) on 3-6 October reendorsed The World Calendar, and as a *Policy Declaration*, the first under the heading *External Affairs*, "requests the Canadian Government to support at the United Nations The World Calendar." This is more than ever important because of Canada's election on 19 October to membership in the U.N. Economic and Social Council for the next three calendar years.

As has been accomplished in the United States, the two large labor groups in Canada—those organized by crafts and on an industry basis—are merging, and as both groups have separately endorsed The World Calendar, it is expected that a request to the government from the resulting consolidation for support of The World Calendar will

be made. Having regard to the endorsements on record with the government from employer organizations, from labor, from scientific and other important organizations there should be little doubt about Canada's position when the item of World Calendar Reform is under consideration by ECOSOC.

A considerable amount of printed matter was distributed to various organizations and individuals throughout the year, and Canadian newspapers carried much news matter and syndicated articles on calendar reform.

In Canada there seems to be little doubt about the ultimate success of the movement—only the time when this will be brought about is uncertain.

France. The first task undertaken by the French Affiliate was to send New Year's greetings to all vital elements in the country. More than three thousand cards were sent to political, diplomatic, religious, economic and educational circles. This campaign had good results as most encouraging letters arrived in large numbers, and even in government circles there was no lack of sympathetic expression—especially from the office of former Prime Minister Mendes-France.

Toward the beginning of the year, a monograph was distributed, pointing out the advantages of the reform and giving an up-to-date account of activity in France. This monograph, which had a very large circulation, emphasized the favorable attitude of eminent personalities, including scientists of well-established repute. There can be no question but that calendar reform has taken a big step forward by spotlighting all the advantages that can be expected from the change in the present method of time measurement, and familiarizing a larger number of people with the essential elements of The World Calendar.

The Affiliate's main objective has been to obtain the support of those in a position to carry weight at the Ministry of Foreign Affairs. Several interviews were had with Mr. Lebeideau, Director at that Ministry, and his attitude was openly favorable, in spite of the opposition of the Grand Rabbi of Paris who had personally pointed out to the Ministry the opposition of the Jewish sects. Abbé Chauve-Bertrand, who for more than thirty years has been France's leading expert on calendar reform, also increased his efforts in order that the French Government's reply to the United Nations would be favorable.

In view of all this, some people may register surprise at the doubtful tenor of the text of the report submitted by France to the U.N. Secretary-General and ask the reasons why the reply was not more wholeheartedly in favor of the reform. However, this would seem to reflect one of the aspects which during the past few years has been typical of the foreign policy of France. The United States has taken in hand the direction of the fate of Western affairs, and without being in the tow of the United States France is, nevertheless, inclined to adopt, toward problems which have nothing to do with high policy, a position close to that taken on the other side of the Atlantic. Therefore the hostility on the part of the United States toward any plan of calendar reform has not failed, without the slightest doubt, to influence the terms of the French report. In view of these facts, it would appear that if in the near future, as is ardently hoped, the United States should adopt a favorable attitude, France along with a large number of other nations would like nothing better than to "follow the leader."

The publication this year in France of Miss Achelis' book *Of Time and the Calendar* will be of great value in advancing The World Calendar in the years ahead. This remarkably well-documented work, which has been slanted to the French reader by the preface, presentation and testimonials added by this Affiliate, was highly commended by specialists in the field as well as the general public. It is a book that will take its place in the annals of all that has been published on the reform of the calendar.

Germany. Towards advancing the international movement for calendar reform, the members of this Working Committee had various discussions with the appropriate ministries and gave talks on the subject before interested members and representatives of industry.

In view of the fact that Germany has not as yet been officially admitted to member-

ship in the United Nations, the Committee reached the conclusion that "it is to be hoped that the representatives of the German Government will signify their agreement to a majority resolution by other governments, subject to the provision that if an international reform should be decided upon *all* nations would take part; further that *all* nations would give effect simultaneously to the international calendar which is adopted, that *all* nations would have to ratify an international agreement of this nature."

If it should be established that other nations were overwhelmingly in favor of the introduction of a new calendar, the Committee is of the opinion that the German Government should reveal its readiness to support calendar reform.

Israel. Activities carried out to bring Israeli opinion round to realize the advantages of The World Calendar *as such* have met with not inconsiderable success, reported Mr. Daniel Sher, the Association's Representative in Israel. In fact, the advantages of The World Calendar (*i.e.*, under aspects other than those affecting Jewish survival) are hardly any longer questioned in the Israeli press and public opinion.

Articles in favor of The World Calendar have been published in the press, and literature has been distributed widely. The Hebrew edition of the monograph, "What Israel and World Jewry Would Gain from Calendar Reform (*BaMe Yoil Tikun HaLuakh HaKlali LeYisrael VeLaTfutsot*)," together with a few copies of its English edition, were produced and widely circulated in the country—to members of the Legislature, the press, public libraries, professional organizations and to individuals. Reactions have been as a rule favorable, the opponents seemingly preferring to ignore it altogether.

Facilities were provided to Headquarters' emissary Colin Jackson on his mission, enabling him to contact Israeli authorities and obtain first-hand information from them.

A nucleus of an Israeli World Calendar Association has been secured, the Association to come into being any time its minimum running expenses can be guaranteed.

Italy. Due to the considerable bewilderment occasioned in Italy by the replies of the various member countries of the United Nations regarding the proposal to adopt the new calendar, it was decided that before initiating any real activity on behalf of the adoption of The World Calendar, it would be well to await a more favorable time or the commencement of fresh activity or a new policy on the part of The World Calendar Association, International.

Japan. The Calendar Association's main activities this year were concerned with obtaining a favorable attitude toward calendar reform on the part of the Japanese Government. Visits were made to the Department of Foreign Affairs, The Department of National Education and to the Secretary-General of the Cabinet. These negotiations were carried on chiefly by Dr. Joe Ueta, Mr. Susumu Imoto and Mr. Eiichi Nobushima. As a result, the Department of Foreign Affairs replied to the United Nations to the effect that the Government had no objection to world-wide calendar reform but that the problem should be studied fully as the reform would be of major importance to the Japanese people.

Japanese World Calendar cards were again printed for 1956, as well as a translation of the pamphlet "A Better Calendar Means A Better World" to commemorate the 25th Anniversary of The World Calendar Association. A Japanese edition of Miss Achelis' recent book, *Of Time and the Calendar*, has been published and will be distributed in the New Year.

The Calendar Association is particularly hopeful that India's activities at the United Nations will meet with success, as calendar reform is essential for human life especially from the modern statistical point of view.

New Zealand. There is a more general awareness of the meaning and usefulness of calendar reform in New Zealand than ever before; and, except for small religious minority groups which exert a surprising influence, most people express a favorable opinion of the suggestion.

Lectures, radio talks and newspaper articles have been given from time to time on the subject and have been favorably received.

The policy of the New Zealand Government, however, appears to be the same as stated in last year's report; and it would seem that only a strong international move, together with public opinion, would cause a change in policy.

Norway. Major K. S. Klingenberg of the Norwegian Affiliate reported with regret that in the year 1955 nothing—as far as he knew—had occurred in Norway concerning The World Calendar. His health hindered him in undertaking activities for the Association. However, when Mr. James Avery Joyce, Honorary Secretary of the British Section, arrived in Oslo on his trip to the Scandinavian countries on behalf of The World Calendar Association, International, Major Klingenberg was able to arrange an appointment for him at the Foreign Ministry where they had an interesting and important interview.

Pakistan. During the month of August a new committee for calendar reform was established in Pakistan through the efforts of Professor Colin Jackson, who did promotional work for The World Calendar Association while on a trip to the Far East. Professor Jackson was able to secure the services of Mr. Sharaf Faridi of Karachi as Chairman of this Committee.

Mr. Faridi reports that he has had discussions with important individuals on the subject and has been successful in arousing the interest of the Pakistan Student Council. He plans an extensive program to introduce The World Calendar to the people of Pakistan.

Peru. It is with real regret and sorrow that the Association reports the loss of the loyal and active Chairman of the Affiliate of Peru, Senor Don Luis Montero y Tirado, who died this spring. He had led The World Calendar movement in Peru since 1934, and it was during that period, in 1947, that Peru initiated consideration of The World Calendar by the United Nations by requesting the inclusion of a resolution on the agenda of the Economic and Social Council.

Philippines. The major activity in the Philippines has been a publicity campaign through articles published in newspapers throughout the country, particularly the *Philippine Free Press*. A letter, together with World Calendar literature, was mailed to the members of the Upper and Lower Houses of Congress, with favorable response.

United Kingdom. The British Section, which held five full meetings of its committee during the last twelve months, and a similar number of meetings among its Honorary Officers, has maintained the work of the Buckingham Street office, dealing with a large number of enquiries and routine matters, such as the dispatch of literature to individuals, organizations and the press. As the European Office since the summer of last year, there has also been a continuous flow of correspondence with individual Affiliates and other contacts abroad. The Honorary Secretary has conducted his own work for the Association from his chambers in the Temple, but either he or the Assistant Secretary made a point of visiting the office daily to deal with the current work. The Honorary Secretary paid three extensive visits abroad on World Calendar matters during the course of the year, as mentioned below.

Extensive circularization of press releases and the publication of new pamphlets—as had been the practice in former years—was not proceeded with during 1955; but an English edition (500 copies) of Miss Achelis' book, *Of Time and the Calendar*, reproduced with a British jacket, was distributed for review purposes, the sales of the book being in the hands of Messrs. Neville Spearman. No public meetings were held during the course of the year nor, as in former years, any approaches to H. M. Government on specific points; but, at the end of the year, our Press Officer, Mr. Harold Watkins, was invited to appear on BBC Television, which he did with conspicuous success on the 2d of January 1956, thus bringing The World Calendar cause before at least 6,000,000 viewers.

Following the visit of Colin Jackson to the International Conference of the Junior Chambers of Commerce in Edinburgh in November, our distinguished sponsor, Sir Harold

Spencer Jones, received an invitation—which he has accepted—to address the Annual Conference of the British Jaycees organization in London this coming February. Thus, the New Year opens auspiciously for the British Section, as it is expected that the New Year's broadcast will produce a considerable number of enquiries and press comments.

During the course of the year, the British Section has played a prominent part in the reorganization proposals which are coming before the Annual Meeting in New York, and has felt it a privilege to nominate Mr. A. J. Hills, Chairman of the Canadian Affiliate, as the new President, which nomination has been seconded by the Australian Affiliate.

Possibly the most useful contribution to The World Calendar cause which the British Section has made during the course of the year lay in the three visits abroad of the Honorary Secretary, Mr. Joyce. During January, he spent ten days visiting Brussels, the Hague, Copenhagen, Stockholm and Oslo, and had many interesting discussions with government officials in the respective Foreign Offices on their national attitudes toward the Indian proposal.

In view of the importance of maintaining contact with ECOSOC and the U.N. delegates who were responsible for the progress of the World Calendar Reform item on the agenda, Mr. Joyce spent over two months in Geneva during the summer looking after World Calendar interests, attending the appropriate sessions of ECOSOC, and speaking on our behalf at several NGO Conferences, as well as undertaking a large number of interviews with individual delegates.

Coming to New York for the Tenth Annual United Nations General Assembly, Mr. Joyce renewed his contacts with the delegates and U.N. officials. Together with Mr. Hills and the Association's lawyer, he took part in an important interview with the Chiefs of the NGO Section of the Secretariat on the 18th of November, at which the future plans of the Association were discussed in a most constructive way and mutual assurances exchanged on the important question of retaining the Association's Consultative Status.

The British Section places on record its appreciation of the leadership of the retiring President over the years, its confidence in the incoming President, and its belief, following adjustments which are inevitable from time to time in the structure and organization of all worth-while movements, in the successful termination of the Association's world-wide campaign to bring about the universal adoption of The World Calendar.

Venezuela. The new Committee formed this year under the chairmanship of Senor Manuel Ramirez of Maracay has been most active in promoting The World Calendar in that country. A series of articles—one written by the Chairman himself—appeared in the weekly publication *Ultima Hora* during July, August, September, and October. Material was sent to the press throughout the country as well as to important individuals in government and other fields.

United States. The report of the United States Affiliate covers the activities of The World Calendar Association, Incorporated, and the International Headquarters which were directed through publications, lectures, the press, exhibits, studies, conferences and resolutions.

At the 19th Session (Second Part) of the United Nations Economic and Social Council, 16 May 1955, the item on World Calendar Reform was postponed for consideration until the spring of 1956, in order to allow the governments more time to express their views. The motion for postponement was made by India, and was adopted by 10 votes to 6, with 1 abstention. Countries supporting India were Argentina, Czechoslovakia, Dominican Republic, Ecuador, Egypt, Turkey, U.S.S.R., Venezuela and Yugoslavia. It was opposed by Australia, China, Netherlands, Pakistan, United Kingdom and United States. France abstained. It is anticipated that this spring ECOSOC will establish a study committee to determine the best calendar for world usage—The World Calendar.

With The World Calendar before the United Nations for decision, Miss Achelis in March became convinced that her work through the voluntary Incorporated and International World Calendar Associations was accomplished, and the Advisory Committees of the Incorporated Association as well as the Affiliates and associated Committees of the

International Association were duly notified of her decision. Therefore the Incorporated Association has withdrawn from the International Association and will be dissolved the end of April. This December 1955-January 1956 issue will be the last issue of the quarterly *Journal of Calendar Reform* which has had a circulation ranging between 18,000 and 23,000 copies and has proved to be a valuable source of information. In early November, the Editor, Dr. Clarence R. Decker, left the Association due to the increasing demands of his other activities.

Throughout the year the headquarters of the Association has been occupied with the preparation and distribution of material for schools, colleges, conventions and special groups of various kinds. Releases were sent to and articles were published in various house organs, magazines and the press. Radio and TV programs have presented broadcasts, notable among these being Arthur Godfrey, Bing Crosby, Ted Malone and Dean Cameron. Miss Achelis was interviewed by Mike and Buff Wallace over CBS and also by Alma Dettinger over WQXR. Edward Rosenheim, Jr., on the Chicago Round Table interviewed Dr. Richard Parker, Professor Quincy Wright and Dr. Decker.

Lectures and discussions were given before various clubs, societies and other groups. Speakers included Mr. Edward F. Flynn of St. Paul, the Reverend John R. T. Hedeman of Baltimore, Mr. Jacob E. McColly of Pennsylvania, and Miss Achelis herself spoke on several occasions, notably at the New York City Control of the Controllers Institute.

Many new endorsements and several re-endorsements were given in 1955. They include the National Retail Dry Goods Association, United States Junior Chamber of Commerce and a number of local and state Jaycees, also various Rotary, Kiwanis and Lions Clubs across the country, as well as business and professional groups.

The World Calendar Exhibit, on view for a year and a half at the Hayden Planetarium-Museum of Natural History, New York—and seen by an estimated over-a-million visitors—was transferred to the Fels Planetarium of the Franklin Institute, Philadelphia.

Of Time and the Calendar, a book by Elisabeth Achelis, was published the 22d of January 1955 in New York by Hermitage House. Through the cooperation of the British Section, this book in a new jacket is being circulated in England, and the French and Japanese Affiliates have had it translated and published in their own countries. Favorable reviews, letters and the continuous demand for this book evidence the very real interest shown in the new calendar—The World Calendar. (Because of the closing of Hermitage House, *Of Time and the Calendar* has been transferred to Thomas Nelson & Sons.)

On the 21st day of October 1955, the 25th anniversary of The World Calendar Association, Incorporated, at a luncheon at the Hotel Plaza, the Staff presented Miss Achelis with an appreciative testimonial, as shown below:

for your vision and leadership as Founder and President of The World Calendar Association, Incorporated and International;

for your unselfish and tireless efforts in gaining international recognition of the broad and profound significance of calendar reform;

for your inspired and courageous support of The World Calendar, winning for it, among the hundreds of plans presented, first place at the League of Nations and the United Nations;

for your unique foresight of The World Calendar, not only as a better calendar but through World Day as the enduring symbol of a better world—a world of peace, good will, and constructive endeavor; and

Appreciation for the opportunity to share in the great "Cause" and assurances of affectionate devotion. Signed: Harriet A. Lillie, Linda deF. Halsted, Alice B. Connolly, Phyllis Block, Herman Ludel, Clarence R. Decker.

Distinguished visitors from abroad to the headquarters office this year included. Sir Harold Spencer Jones, Astronomer Royal of Great Britain; Mr. R. W. Parsons, Principal of South Australian School of Mines and Industries, and Chairman of the South Australian State Committee for The World Calendar; the Reverend Conrad M. Morin, O.F.M., and Monsignor Amato P. Frutoz of Montreal and Rome; Mr. James Avery Joyce of London, Honorary Secretary of the British Section; Mr. A. J. Hills of Ottawa, Chairman of the Canadian Affiliate; and Dr. Bhola Panth of India.

THE WORLD CALENDAR

COPYRIGHT

IT IS important to understand the meaning and significance of copyright. To copy right a plan, publication or an article is to protect and assure inviolate the plan, publication or the article. This is also true in relation to The World Calendar, clearly explained in the first quarter issue of the *Journal of Calendar Reform* in 1948.

There is no other plan by the name of *The World Calendar* than the one which was copyrighted in November 1930 when it first appeared in pamphlet form, published by The World Calendar Association, Incorporated. This plan received additional copyright with the publication of the *Journal of Calendar Reform* in its first issue June 1931 and with subsequent *Journals*.

The copyright is absolutely essential in that it protects The World Calendar from mutilation and unjustifiable change. It guarantees the plan as it is and with the ceasing of further issues of the *Journal*, December 1955-January 1956, the duration of the United States copyright will be extended by renewal for a further period of 28 years. Any infringement of The World Calendar is a violation of the copyright law and the infringer subjects himself or herself to legal procedure for violating it.

The World Calendar is described as follows:

"Every year is the same.

"The quarters are equal: each quarter has exactly 91 days, 13 weeks or 3 months; the four quarters are identical in form with an ordered variation within the three months.

"The three months have 31, 30, 30 days respectively.

"Each month has 26 weekdays, plus Sundays.

"Each year begins on Sunday 1 January; each working year begins on Monday 2 January.

"Each quarter begins on Sunday, ends on Saturday.

"The calendar is stabilized and made perpetual by ending the year with a 365th day following 30 December each year. This additional day is dated 'W,' which equals 31 December, and called *Worldsday*, a year-end world holiday. Leap-year Day is similarly added at the end of the second quarter. It is likewise dated 'W,' or 31 June, and called *Leapyear Day*, another world holiday in leap years."

There are *three outstanding features* of the plan which distinguish it from other 12-month revisions.

1. Every year, every quarter-year and every week begins with Sunday. In that manner the familiar order of the week—Sunday the first day and Saturday the seventh day—is upheld. To begin every year and week on a higher spiritual note than the merely materialistic is far reaching and of real moral and psychological significance and value.

2. The 365th day of ordinary years is placed at the end of each year where it logically belongs. After the four-quarter year is completed with Saturday 30 December, the 365th day, *Worldsday*, the new world holiday New Year's Eve, is dated 31 December or W December. The *letter* date—W—used because it denotes at a glance this new world holiday of universal observance.

3. The extra day in leap years to make up the quota of 366 days in such years is placed in mid-year, by which method a perfect balance is had between the two half-years. The leap year holiday *Leapyear Day* falls between Saturday 30 June and Sunday 1 July. It too can be dated either 31 June or W June.

Any infringement or attempted change in The World Calendar and the plan itself would, of course, make it a different plan that would require a name other than that of The World Calendar.

Twenty-five years of activity, experience, research and study have clearly demonstrated the undoubted superiority of this plan which has received the greatest number of approvals. This perpetual World Calendar of equal quarters has been aptly described as the very best with all conditions considered. It is confidently expected that it will become *The World Calendar for the Whole World*.

CHANGE PREDICTED IN OUR LIFETIME

(From Germantown, Pa., *Courier*, 29 December 1955)

"TAKE the length of the month and add to it the length of the year. Mix into this a little bit of many religions along with some of the sciences. Now add to this some knowledge of agriculture and spice the entire conglomeration with one of mankind's vices—egotism. Stir constantly for about 6,000 years and this little bit of chaos finally emerges as our calendar. For that, indeed, is the story of the origin of the calendar we use today," says Dr. I. M. Levitt, Director of the Fels Planetarium.

When man first began formulating the calendar, he made the supreme error. He tried to weave into the calendar three natural units of time: the day, the month and the year.

This was an impossibility, says Dr. Levitt, for there were not an even number of days in the month; there were not an even number of days in the year; and there were not an even number of months in the year. This, in turn, meant that any calendar which man devised was at best a compromise. The tying together of these incommensurate intervals finally was achieved in a fashion and our calendar evolved.

Even after the two great reforms of the calendar—the Julian and the Gregorian—Dr. Levitt points out that our calendar is still an outmoded timepiece. The trouble lies in our complex civilization. Because our civilization is complex, we must have a calendar which will take cognizance of this complexity and adjust for it. It is obviously impossible to do this with our calendar.

One of the solutions suggested for the calendar problem is The World Calendar. Of all the panaceas offered, this, Dr. Levitt says, is the only one that does not seriously violate our "calendar sense."

Within the lifetime of most of the people who read this, there will be a change made in the calendar we use. The change is inevitable and only a matter of time.

AN EXPERT'S VIEWS ON CALENDAR REFORM

An interview in the L'Yonne Républicaine, France, entitled "A Corbignian by Adoption, Abbé Chauve-Bertrand is an Expert on Calendar Reform," signed by Mathieu.

SUNDAY, 29 May, the Feast of Pentecost! 29 May, the horse fair at Corbigny! What an unfortunate coincidence! For such a great religious celebration as that of the Pentecost can hardly be said to accord well with a commercial display. On its modest scale, this coincidence aroused too much comment in our rural countryside for anyone to fail to foresee a certain amount of discomfiture. Thus it was that we came to investigate the question of calendar reform, which an international commission is studying at this time, and to want to draw the attention of our readers to the obvious advantages of stabilizing the dates of the great festivals by modifying the structure of our Gregorian calendar itself.

In this connection we consulted the text of a press conference held by Miss Elisabeth Achelis, president of The World Calendar Association, and came upon the following sentence: "Abbé Chauve-Bertrand has long been a leader in this cause. There is no more eminent authority on the subject than he."

We happened to be acquainted with Abbé Chauve-Bertrand, whose tall, erect figure is a familiar sight these days in Corbigny. As the question merited study

and we had to admit that we possessed only the most superficial knowledge of it, we turned to the Abbé, knowing that we would be cordially received and that he was competent to give us the information we were seeking. And that was just what happened.

We give below an account of our interview. It is brief, to be sure, but should be of interest to all those who are intrigued by the question of calendar reform.

The "Retreat House" of the priests is a large building surrounded by gardens and terraces on the hillside overlooking the Anguison. The gate is old and heavy, the courtyard shady, the floors of the long, bright corridors spotless. The warmth with which the Abbé greeted us put us immediately at our ease.

"Father, I used to know you at Saint-Révérien. To the service which you did me then I would like to add one more! But first I want to introduce you to the readers of 'L'Yonne Républicaine.' How long have you been at Corbigny?"

"I have been at Corbigny since September 1953, after having spent 31 years as parish priest at Saint-Révérien."

"How did you happen to come to this region, Father?"

"After finishing my studies at the great seminary in Nevers, I spent two years at the Benedictine Abbey of Ligugé, followed by six years in Belgium and seven in Spain."

"Were you already interested at that time in the question of calendar reform?"

"Yes! As a matter of fact, I was sent to Spain to assist Dom Guépin, Abbé of Santo-Domingo-de-Lilos, in a project for simplifying the monastic breviary, which was the basis for the liturgical reforms decreed by Pius X in 1910.

"In 1914 I returned to France, like so many others at the outbreak of the First World War. After my demobilization in 1919 I returned to my original diocese, where I was named parish priest of Thianges, of which I have written a history. In 1922 I was named parish priest of Saint-Révérien, where I remained until 1953."

To complete this biography, it should be stated that Abbé Chauve-Bertrand, in addition to historical works such as *L'Eglise romane de Saint-Révérien* (The Romanesque Church of Saint-Révérien) and *Monographie de Thianges* (Monograph on Thianges), has written more than 200 articles on various subjects, particularly on the question of the calendar, and works on social questions, such as *Le règne du Frère* (The Reign of the Brother). Outstanding among his works are *Le plus ancien livre des hommes* (Man's Oldest Book) and *La crise d'âme d'un jeune prêtre* (A Young Priest's Spiritual Crisis).

In recognition of his thorough study of all questions concerning calendar reform, he has been asked to participate in many international congresses (Liège, Rome, Geneva, Paris, etc.), where his

competence has always been unanimously acknowledged. As early as 1912, after the publication of his first articles, he was presented to the Astronomical Society of France, whose founder and president, Camille Flammarion, was his sponsor.

"Father, can you tell me just what calendar reform is all about and what stage it has reached?"

"I dealt with this question at the Chronometry Congress in Paris in October 1954, and I shall try to be as clear and brief as possible:

"The idea of reforming the calendar is not new. As early as 1834, the learned Abbé Mastrofini had proposed stabilizing the weeks. Fifteen years later, Auguste Comte offered his positivist calendar of 13 months with 28 days each. Next, Camille Flammarion, apart from his own project, staged a competition in 1885, the account of which aroused great curiosity when published in the *Bulletin of the Astronomical Society of France* in 1887. But it was after the beginning of the 20th century that the campaign really gained momentum. Then Chamber of Commerce congresses and scientific conferences began clamoring for the establishment of an unvarying universal calendar. In May 1914, following the congress at Liège, the Swiss government was preparing to convoke a meeting of representatives of all countries, when the First World War broke out. In 1919, the Astronomical Union took up the work again, and after an intensive study it announced its conclusions at the congress held in Rome in 1922. These conclusions were passed on to the League of Nations, which then undertook to submit the question to governments, major world organizations,

and high religious authorities. In 1937 the project was ready to be acted upon . . . and the Second World War broke out.

"In the meantime, in 1930, the powerful World Calendar Association, of which Miss Achelis is president, had been founded in New York.

"Why should our calendar be reformed? We've gotten along all right with the one we have, in spite of its faults, if indeed it has so many, say the conservatives, so why can't we go on with it?

"The advocates of progress answer, then why not continue travelling in ox carts or telling time by a sun dial?

"The calendar should be reformed, or rather perfected, because it is the regulator of human activities, and its imperfections, giving rise to innumerable difficulties, are all the more keenly felt in our era when organization is king, for the greater well-being of all mankind.

"Furthermore, nowadays everything points toward universalization. An international system of weights and measures, the *T. S. F.* [radio], the present United Nations, etc., do not all of these call for a calendar which would also be universal? Not only universal but perfected, because the calendars now in use, not excepting our own, are subject to great criticism among scientists, economists, educators and churchmen themselves.

"Besides, it is not a question of modifying our Gregorian calendar in its exclusively Gregorian aspect, that is, the suppression of three bissextile days in 400 years, this rule having been unanimously recognized as simple and convenient.

"The rest of this calendar actually antedates Pope Gregory. It comes down

to us from the Egyptians through the Chaldeans and the Romans. It was put together piecemeal, without any overall plan. The chief complaint against it is that the days of the week always fall on different dates of the month—or vice versa. Likewise, the dates of the month are displaced every year in relation to the days of the week of the preceding year. In commerce and industry, in accounting, statistics, and so forth, it is very troublesome to find that the end of the month, the quarter or the year coincides with a Sunday or a holiday or even sometimes, in view of the 'bridge' system, with two or three non-working days. The same thing applies to fairs, markets and similar activities. (This year we had the example at Corbigny.)

"In education, it is the variability of Easter, which can fall anywhere in a period of 35 days between 22 March and 25 April, that causes the greatest inconvenience. If we had more exact quarters, work could be organized and programs distributed more efficiently. One has only to recall the acrobatics engaged in during recent years to fix the dates of vacations, in order to realize that our calendar is not conveniently designed.

"As for the religious point of view, we priests can readily see that it is in our own ecclesiastical calendar more than anywhere else that confusion exists."

"I can well understand you there, Father, but tell me, by what means can the calendar be perfected?"

"The weeks should be stabilized! This would do away with the continual variation of the dates of the month in relation to the days of the week. The 1st of January should always be a Sunday!

Fifty-two weeks make up only 364 days, so what would be done with the 365th and the occasional 366th? The 365th would be put at the end of the year, the 366th in the middle, under a name to be chosen.

"Scientists and meteorologists above all are in favor of having the year begin on the day of the winter solstice, that is, 22 December. This is, moreover, the No. 2 conclusion of the commission of the Astronomical Union. But although the means of arriving at such an arrangement without too violent an upheaval seem very easy, there are certain hesitations with regard to its application.

"Fixing the date of Easter: This has been sought by many different groups and for many reasons. It would meet with little or no opposition in high places, for as far back as 1897 Pope Leo XIII made it known that he would be disposed to consider what he called a relative stabilization, thanks, as he said, to a movement of public opinion backed by the opinion of scholars. He spoke of 'relative stabilization,' for at that time there was as yet no serious thought of stabilizing the weeks. Subsequently, the Protestant and Orthodox Churches signified their intention of accepting the same measure, provided that it should be applied at the same time by all the Christian confessions.

"We should establish a scientific and practical calendar which would be as nearly perfect as possible and which would be acceptable to all peoples, leaving to the competent authorities the question of their civil and religious holidays. This is what the commissions of the Astronomical Union and the A.F.N.O.R. (Association Française de

Normalisation) want, and it is also the goal of The World Calendar Association."

"In your opinion, Father, what would be the attitude of the Holy See toward such a reform?"

"As regards the attitude of the Holy See toward such a reform as a whole, not being qualified to speak in its name, I shall content myself with citing what everybody could read in the *l'Osservatore Romano* on 28 June, 1954, signed by Father O'Connell, S.J., Director of the Vatican Observatory: 'The Church has no reason to oppose in principle a modification of the present Calendar . . . provided, naturally, that certain conditions which She Herself cannot overlook, are observed.' High ecclesiastical dignitaries have been its partisans, among whom I would like to cite the eminent Cardinal Nasalli Rocca, censor of the Pontifical Liturgical Academy, who was Archbishop of Bologna, the birthplace of Gregory XIII, when he died in 1951. He wrote to me in 1949: 'We should advance this cause.'"

"Where does the cause of calendar reform stand at present, Father?"

"A great step forward has just been made. I refer to the recent decision taken by the Economic and Social Council of the United Nations after a demand for calendar reform submitted by India was included in the order of the day; a draft resolution adopted by all the powers represented in the United Nations was published in July 1954. This same resolution was then circulated among all governments, whether or not they were members of the United Nations, with the request that they submit their replies early in 1955, so that the twentieth session of the Economic and Social Council

could take up the question again with more information to go on. Furthermore, the commission charged with discussing this matter is meeting right now. We shall probably learn the results during the first half of June."

"And now, what do you think are the chances of an early application of the new calendar?"

"1961 looks like a possible date; in 1961, 1 January, will fall on a Sunday, so the change could be effected at that time with a minimum of inconvenience, and we could get used to it more easily.

"There is a strong movement throughout the whole world in favor of calendar reform; twenty countries representing half the world's population desire it; serious economic and social considerations affecting the lives of nations demand it! Personally, after following this question for forty years I am convinced that it will triumph.

"Allow me, before I am through, to give you the resolution adopted by the latest Chronometry Congress at Paris:

"The International Chronometry Congress, meeting in Paris from 1 October to 5 October, 1954, attended by representatives of 26 nations, after having heard the statement of Abbé Chauve-Bertrand on calendar reform, declares itself in favor of the establishment of a calendar which can be adopted by all peoples in place of those currently in use; and invites its President to transmit this resolution to the Economic and Social Council of the United Nations, as well as to all governments whether or not they be members of the United Nations.'"

We thanked Abbé Chauve-Bertrand warmly for his cordial reception and his effort to make the problem as clear to us as the complexities of the subject permitted, and left him to his busy schedule. A half century of work, a competence recognized by experts the world over, are the surest guarantees that Abbé Chauve-Bertrand will be called upon if the labors of the present conference bear fruit.

THE organization with which I am associated adopts the practice of paying its accounts fortnightly by cheque. As with many other businesses, it is often helpful to compare current monthly expenditure with that of the corresponding month last year. But owing to the irregular arrangement of our present calendar it frequently happens that, whereas we had two pay days in the month of this year, there were three in the corresponding month last year. In such a case any comparison is quite valueless. The introduction of The World Calendar would enable an exact comparison to be made, since the monthly structure would be the same each year.—R. W. Parsons, Principal, South Australian School of Mines and Industries, Adelaide.

WE'RE FOR IT

(From The Catholic Messenger, Davenport, Iowa, 5 January 1956)

ALONG with The World Calendar Association, we noted the passing of 1 January 1956 as another opportunity lost for switching over smoothly from the Gregorian to The World Calendar. Similar chances came in 1933, 1939 and 1950; another one won't be around until 1961.

Until we recently read through a packet of leaflets, booklets and reprints sent by the Association, calendar reform, like shell-collecting and bird-watching, left us somewhat cold. Pleasant enough occupations, all of them, but not particularly urgent and somewhat impractical.

To our surprise, we learned from the literature that calendar reform is a world-wide movement endorsed in the United States by individual bankers, lawyers, shoe company presidents, credit bureau managers and school superintendents—not just by newspaper and magazine writers desperate for a topic to write upon at New Year's.

We now know this much about The World Calendar:

That the United Nations has been giving it considerable attention at India's request, through the Economic and Social Council, and will hear another progress report this May.

That in 1955, both the National Retail Dry Goods Association and the U. S. Junior Chamber of Commerce conventions formally endorsed The World Calendar and urged its adoption.

That The World Calendar is basically "Catholic," having been suggested practically in its present form by Abbé Marco Mastrofini in a book published in Rome in 1834.

That the Holy See in 1912 and 1924, and the Jesuit director of the Vatican observatory in 1954, have indicated no objections to calendar reform.

That U. S. business firms would save several hundred million dollars annually with The World Calendar, according to Walter Mitchell, Jr., former managing director of the Controllers Institute of America.

We read more, a great deal more, about calendars generally, and Elisabeth Achelis, who founded The World Calendar Association in 1930.

We're now thoroughly convinced of the advantages of the 52-week, 364-day World Calendar on practical grounds. We also like the fact and spirit of the calendar's world holiday each year: "W December," a day for nations, races and peoples to "come together in peace, harmony and cooperation." A similar holiday would be observed every fourth year as "W June" or 31 June.

Father Mastrofini hit upon this device in 1834, to even off the year into its present 12 months but with day-dates no longer shifting from year to year. As the Association now envisions it, each month would have exactly 26 weekdays and four or five Sundays; several Monday holidays and long week-ends would become the rule; life would be simplified in a number of tiny but significant ways.

Frankly, we're all in favor of the reform which rests now more with the United Nations than with the Association's groups in 36 countries from Argentina to Yugoslavia. The next feasible target date "when the present Gregorian can glide into The World Calendar," Miss Achelis writes, is 1 January 1961—when the year once again will start on a Sunday as it always would in The World Calendar.

"The World Calendar for One World," say the Association's attractive booklets. "Harmony . . . order . . . balance . . . stability."

We're for it.

STREAMLINE THE CALENDAR

By Edward F. Flynn

Edward F. Flynn, Past Governor and Past Director of Rotary International, served for many years as an executive of the Great Northern Railway Company with the title of Director of Public Relations and Assistant to the Vice President and General Counsel. The following article is condensed from an address Mr. Flynn made before the annual meeting of the Wholesale Division of the American Bakers' Association at Atlantic City, New Jersey, 4 October 1955.

WE will save five billion dollars annually, a reliable authority estimates, when we adopt The World Calendar, which is regular, balanced and perpetual. From my nearly twenty-five years' study of this calendar and association with the organization fostering it, I believe these figures are conservative.

You gentlemen, members of the American Bakers' Association, can save many millions of dollars annually when this sensible calendar takes the place of the Gregorian calendar adopted in 1582. It is time now for calendar improvement and reform. Living as we like to think in a streamline world, we should have a streamline calendar. Using our present calendar with its unbalanced, irregular and unsettled system of timekeeping is the same as if the Great Northern's Empire Builder, the New York Central's Century, the Pennsylvania's Broadway Limited, the Baltimore and Ohio's Capitol Limited, the Santa Fe Superchief or the Union Pacific's City of Los Angeles were powered by steam engines such as we used one hundred years ago. In an age of scientific miracles we should

match these wonders by adopting The World Calendar, which deserves a place alongside of them.

Not only you and millions of others can save money, but the railroads too would save many millions of dollars a year by the use of The World Calendar, especially in their accounting departments. You have read railway reports making comparison of car-loadings and earnings—for instance, this year with last year—and often see the explanatory and half apologetic statement that while this year's business for a certain month exceeded last year's by, say, 10 per cent, last year's comparative week contained a holiday and so, after all, the statement is not exactly what it is intended to be because of the wandering holiday or holidays. This can be eliminated and comparative railway statements really mean what they intend when we adopt The World Calendar. Any holiday and especially a midweek holiday interrupts the steady flow of the railway's traffic.

In England, expert accountants after a study of the cost of bookkeeping in the men's clothing trade alone concluded that the saving in accounting in that

country from the adoption of The World Calendar will be approximately \$120,000. Our men's retail clothing business in the United States would surely be about five times that of England and consequently the accounting saving here in this one business alone should be about half a million dollars. If you will multiply this by all the industries in the United States that will save money proportionately in accounting when we adopt The World Calendar, it easily can be seen that savings alone would aggregate at least one billion dollars.

Realizing the great savings that will come from simplified accounting when we use The World Calendar, your own Quality Bakers of America, which renders the independent bakers of this country a valuable and reliable service, was quick to desire the adoption of this calendar. In 1946 Quality Bakers by resolution endorsed The World Calendar for adoption. We are truly grateful for this action and hope your entire organization will follow its example.

Savings to American Bakers

Before pointing out in detail the characteristics of The World Calendar which will result in great savings to you, I have some figures submitted by your members that should convince you of the value of The World Calendar.

I have also talked with some of your members who did not submit figures in writing and all indicated The World Calendar's use will bring great savings.

One concern estimates a saving of 30 per cent in certain weeks, such as those containing Christmas and New Year's in midweek. This organization has a number of small stores in a large Ameri-

can city. Its total savings, the manager states, will aggregate from \$10,000 to \$12,000 a week in any of these holiday weeks when The World Calendar is used and a full unbroken business week comes before a Monday Christmas or a Sunday New Year.

Another retailer in a large city writes: "The World Calendar will be a salvation for all of us in the retail field." This concern referred to a year when Christmas falling on Saturday resulted in retail shops being closed Saturday, Sunday and Monday and it estimated its cash loss at 48 per cent and the loss from stale loaves of 16 per cent. The loss to this small business was about \$2,500 in one week. With Christmas coming on Monday, as it always will when we use The World Calendar, these retailers, who apparently keep open on Sunday, will have two additional business days, Saturday and Sunday.

The Loss to Wholesalers

These are smaller items because they involve retailers. Wholesalers lose accordingly since retailers will not buy bread when their stores are closed.

One large wholesale concern estimates its greatest loss when Christmas comes on Wednesday, its figures showing a loss of 21 per cent for such a week.

A rather large wholesaler in a large city estimates conservatively that its business may net \$250,000 a week. If that week is ended by Christmas falling, for instance, on Friday, its net loss from stale returns alone could easily be 15 per cent or three times as much as the average from returns. This would mean a loss of \$25,000, its average loss from stales being 5 per cent and this Christ-

mas week loss being an additional 10 per cent. Under The World Calendar with Christmas coming on Monday, this great loss will be averted.

From what I have learned through the figures that have been submitted to me, it appears that the wholesale bakers of one large city may easily lose an additional \$100,000 over the usual stale returns when Christmas, for instance, comes on the wrong day, such as in the middle of a week.

But you may argue that the wholesale baker should be more conservative and not have so much bread out for sale at a time like this. This may be true, but it is also a fact that the ordinary wholesale baker's sales manager is not so conservative. If you all became conservative in this manner in order to avoid a loss of \$100,000 in stales, there would naturally be a shortage of bread for sale, which sometimes happens. Do not forget, however, that because of your conservativeness you may well have a shortage of sales in a very large city that may run as high as \$100,000. While this may seem a large sum, the amount, when spread over millions of bread buyers, does not seem so unreasonable. It might, therefore, be better to have your bread ready for sale and not disappoint your customers, but it would be better still to adopt The World Calendar which, with Christmas coming on Monday and thus permitting a full unbroken trade week before Christmas, will prevent the \$100,000 loss.

While this argument refers to one week only, that of Christmas, it would be true to a lesser degree during New Year's week and other weeks when holidays occur in midweek.

Now, by using your imagination or actual figures as nearly as possible and by multiplying the losses in one city by the losses all over the United States, you can see that the aggregate losses might well run into several millions of dollars in this one week alone.

The World Calendar Association

Let me tell you a little about Miss Elisabeth Achelis, the President of The World Calendar Association, to whom we are indebted for the work that has been done in the past twenty-five years toward the adoption of this calendar.

Miss Achelis was vacationing at Lake Placid, New York, twenty-six years ago when Mr. Eastman of the Eastman Kodak Company and Moses Cotsworth of London were trying to have a 13-month calendar adopted. Miss Achelis was alarmed at the prospect of a 13-month calendar. She could see that if it were adopted there would be a great wall between the past and the future insofar as business comparisons are concerned. We would have to forget the past entirely and start all over again. Moreover, she knew that there was no way to divide the thirteen months into quarters, as business people like to do, since thirteen is not divisible by any number evenly. The 13-month calendar offices eventually closed and so far as I know no one is now seriously advocating its adoption.

Miss Achelis returned to New York and later she noticed in *The New York Times* a letter from someone in Denver advocating the adoption of a 12-month equal-quarter calendar now known as The World Calendar. This pleased Miss Achelis, who then set about seriously to see what could be done about

the adoption of The World Calendar. She talked to church leaders, business men and others and found little or no objection to the adoption of The World Calendar. She has devoted her life since then to the effort to have the world adopt this sensible calendar. She believes if we can have all the nations in the world working for and eventually adopting this calendar it will help to bring about permanent peace. And in this belief she has many supporters. A great Rotarian, for instance, has said that if the United Nations would agree unanimously on the adoption of The World Calendar it would prove to the world this body can agree on something and it might then agree on peace throughout the world.

Savings That Will Result from The World Calendar

When holidays occur in the middle of the week, or on any day from Tuesday to Friday inclusive, they cause much absenteeism and often require extra free days for labor. For these days that people are paid when not working, you foot the bill, not the big industry who gives away the days to its employees. There it is merely added to your cost price. When labor takes extra days off that are not paid, it loses a great deal of money, too, as it realizes at the end of the year when income tax returns are made.

As an example of the disturbance caused by midweek holidays let us look at an order issued by former President Truman when he was in Key West, Florida, in December 1951. This isn't a criticism of the former President but rather of our calendar which makes for such extra holidays. Here is a news re-

lease authorized by the former President:

"Key West, Florida, 4 December 1951. President Truman today granted government employees a four-day holiday for Christmas and a three-day holiday for the New Year.

"The President signed an executive order giving government employees time off from Saturday preceding Christmas through Tuesday, Christmas Day. Employees will return to work Wednesday, the day after Christmas; they will then be given three days off from Sunday through New Year's Day."

But for employees whose five-day week required them to work on some of the days made free by the former President, the order proved costly to the taxpayer. That gratuity of the then President cost us millions and millions of dollars. This would not have happened *if* we were using The World Calendar, because Christmas always falls on Monday and New Year's on Sunday.

There is a movement on foot with considerable support to have all holidays come at week-ends, or more particularly on Mondays. It would be a simple matter to arrange this if the people of the country wish such an arrangement, for today no churchman, no emperor and no dictator changes calendars or arranges holidays. Our people, all of us, must decide what we wish to do about these matters. There is no time to elaborate on the simplicity of having all our important holidays legalized for Mondays. By having them come on that day we would save the large amount already mentioned—about two billion dollars.

You know how much absenteeism is caused by these wandering holidays and the day or days immediately before or after them, and you know that if employees absent themselves on days other

than those their contracts provide, little can be done about it.

Speaking in a southern city on this topic, I explained how this absenteeism affected us in the north. After the meeting, the head of a great manufacturing plant in the south employing thousands of people told me that in 1952, when Christmas fell on Thursday, their experience was most unsatisfactory and costly.

Arguments for more than one extra day off were advanced and agreed to. But with only one and a half working days before the Christmas break and one day following, with preparations before and absenteeism after the midweek holidays, the industrialist said: "We lost an entire week."

Multiply such an experience by five or six, as this situation might happen when other holidays come during the same year in midweek, and you can easily see that losses in wages might run to two billion dollars. And when labor doesn't receive that great sum no one else gets it because labor doesn't have it to spend. At the same time there is a drop in production possibly of two billion dollars, a total loss of four billion dollars which, added to the one billion to be saved in bookkeeping when operating under The World Calendar, makes at least five billion dollars lost to the people of the country—irretrievably lost.

Hundreds of Millions Desire The World Calendar

Many great accounting organizations have gone on record in favor of The World Calendar, including the American Institute of Accountants. Some of the leading scientific organizations, in fact the most important ones in the United

States, Canada and Great Britain, have expressed a desire for the adoption of The World Calendar and this includes the American Association for the Advancement of Science. Many great chambers of commerce have endorsed this movement. The Chamber of Commerce of Great Britain is for it and the Canadian Chamber of Commerce has gone on record twice for the advancement of calendar reform—specifying The World Calendar. India with 380 million people and thirty different calendars in use in its country has indicated before the Economic and Social Council of the United Nations, in charge of these matters, its great desire for The World Calendar. Yugoslavia backed up India on a motion that the United Nations make a study of calendar reform.

Our country had a great opportunity to do some excellent international relations work by going along with these and the many other nations all around the world who want The World Calendar, but our State Department refused to obtain this good will saying that we here in the United States have not created enough public opinion in favor of The World Calendar. Some of our largest Christian churches have indicated that they either wish to have The World Calendar adopted, or have no objection to its adoption. Many of our well-known church leaders have written their approval of The World Calendar.

People ask the position of the Catholic Church in this matter, knowing of its action on the Gregorian reform. The Catholic Church has not gone on record in favor of the adoption of The World Calendar, but on two occasions it has expressed an opinion indicating it has

no objection to such a calendar reform.

In contrast to all of these, one small Christian and a fraction of the members of one non-Christian religion are opposed to the adoption of The World Calendar.

How To Have The World Calendar Adopted

Because The World Calendar Association is a non-profit organization and its charter does not permit it to lobby before our Congress, we do not have the right to ask you to request your United States Senators or Congressmen to work for The World Calendar, but we do ask you

to write our State Department to urge the United Nations to study calendar reform. That is all we are asking at the present time because we know that if a change is made in calendars The World Calendar will be the one which the United Nations will recommend for adoption.

A resolution from your great organization requesting the United Nations to adopt The World Calendar will be helpful at this time.

[In closing Mr. Flynn recited four verses from Longfellow's "The Builders."]

WORLDSDAY—NEW YEAR'S EVE

TO little Susan Eisenhower as well as young and old who have their birthdays on New Year's Eve, this day will become wonderfully significant. With The World Calendar in use, New Year's Eve children will be particularly blessed in having their birthdays on the new World Holiday—*Worldsday*—which mankind will be celebrating with them.

Not only will New Year's Eve chronicle the passing of one year to another, but there will be established a new holiday observed in a universal spirit of good will, in a brotherhood of nations and in a world fellowship of men, women and children everywhere on earth.

It will make little difference to what race or nation we belong or what our individual belief may be. It is expected that differences will be submerged and discord minimized because in the observance of the New Year's Eve—*Worldsday*—we shall all be united in spirit.

Thus the new *Worldsday* holiday will be observed and celebrated in a pæan of joyous song and praise in our homes and in our hearts—a life-giving blessing to everyone.

CALENDAR CHANGE—A CHALLENGE

By Elisabeth Achelis

*An address before the General Accounting Committee, New York City
Control of the Controllers Institute of America, 10 October 1955.*

WE are living in an era of change. Time-worn precepts and practices are being challenged. Change is a vitalizing force in the life and growth of every individual, every nation and of civilization itself. In making changes, however, care must be taken that they are really improvements, preceded by full information and careful study. This is particularly true of our time-system, the calendar.

Our present calendar is a relic of the past. Many individuals and institutions have long recognized that it should be revised so as to provide a uniform invariable calendar. The General Accounting Committee of the New York City Control of the Controllers Institute of America is among those most keenly aware of the urgency of the reform. It is, therefore, a special pleasure to address your Committee this evening and to invite your support in this "cause," which is now before our government, the governments of all other countries and the United Nations.

History

The earliest modern calendar reformer was a mathematician and philosopher, Abbé Marco Mastrofini. In 1834 he wrote a book wherein he envisaged the year as beginning on Sunday, 1 January, containing 364 days and 52 consecutive weeks. He then placed the 365th day between two weeks, after the end and before the beginning of the year, in order to keep the calendar in step with the solar year. This day he called "*blanc*," meaning "white," not "blank," as too often mistranslated. Likewise the leap-year day, the 366th day, was inserted between two weeks in leap years.

This 19th Century pioneer found the stabilizer which had eluded reformers in the past. By placing the 365th and 366th days outside the week yet within the year, a steadfast, scientific and reliable calendar became available for the first time in history.

Yet seventy-six years were to pass before calendar reform was seriously considered. In 1910, attention was given it by the International Chamber of Commerce in three biennial conferences. War interrupted further deliberations. With the League of Nations established in 1922, the Chamber placed the matter in the League's custody, and in 1931 the first international conference on the calendar was held by the League at Geneva. Another war interfered, yet, notwithstanding, calendar reform marched steadily forward until it has now progressed to the United Nations, where at the 21st Session of the Economic and Social Council, April 1956, the subject will come up for discussion and consideration. At this Session it is anticipated that a Calendar Committee will be formed to undertake an international, impartial and scientific study, looking toward the adoption of a civil calendar best suited to the needs of the peoples everywhere.

Defects of the Present Calendar

Now we question, what is wrong with the calendar? In its basic form it has served man for 2,000 years, and in its present form it has served since 1582—why should it be changed?

Controllers through daily experience realize, better perhaps than any other group, that the calendar is completely unsatisfactory. It is never the same from year to year. It has 28 different kinds of months and 14 different kinds of years, repeated in 6, 5, 6 and 11 years.

Months have irregular numbers of days, they may have four or five Saturdays, Sundays, Mondays, and so on throughout the week, and weekdays within the months vary from 24 to 27, a difference of $12\frac{1}{2}$ per cent.

The so-called quarter-years are *not* exact quarters, differing in lengths of 90, 91, 92, 92 days, whereby the first half-year has 181 days, the second half 184 days.

In addition, each year must take a day from a 53d week and leap year two such days. The average income-taxpayer, for example, normally pays 52 times on his weekly salary, yet occasionally he is obliged to pay 53 times—when the weekly payday happens to fall on a day of the 53d week. This can be adjusted the following year provided the conditions remain relatively the same.

Holidays, too, have a most annoying movability, varying within a period of seven weekdays or having different dates. The cost and difficulties attending wandering holidays are enormous and frequently mar the enjoyment of the holiday itself. When the holiday falls on a Wednesday or is wedged between two business days, a Tuesday or Thursday, it upsets the smooth flow of business with its accompanying reaction on workers and management.

This unpredictable and confusing calendar is also wasteful and expensive. For instance, New Year's Day in 1942 was particularly costly. As it came on a Thursday, the New York public schools had to open for a one-day session on the isolated Friday at an estimated cost of \$22,259 for heat and light, not to mention pupil and faculty lamentations.

The same year proved costly in another way. Christmas came on a Friday and newspapers did not know how to plan their issues for the following Saturday. There was no certainty as to how many stores would be open Saturday, so that there was no accurate gauge for the number of columns needed. One New York newspaper, with a circulation exceeding one million, discovered to its dismay that not only was its advertising lineage off 65 per cent but it had overprinted 80,000 papers.

How long will we endure this waste and confusion? How long will we tolerate a calendar so contrary to the purposes, practices and ideals of contemporary life?

Proposals for Reform

Several proposals have been advanced to improve this unhappy situation.

They include a 13-month plan with its many radical changes and monotonously regimented months, which requires a shift of 337 dates in the calendar; plans calling

for months of 5, 4, 4 or 4, 5, 4 or 4, 4, 5 weeks with their inequalities; a plan beginning the year with Monday or a zero date; a plan beginning the year on the winter solstice or spring equinox, requiring many adjustments. All these and many others were studied by the League of Nations and found unacceptable. Of the many plans presented to the League by 1937 only The World Calendar was submitted to its member and non-member states.

Ten years later, in 1947, the former Secretary-General of the United Nations, Trygve Lie, stated in his report: "Of all the drafts studied on the international plane, the draft [The World Calendar] submitted to the Economic and Social Council by the delegation of Peru is the one which has received most favourable comments."

The World Calendar

What is The World Calendar?

It is a calendar with one unvarying year of 12 months, divided into equal quarters; each quarter contains 91 days, 13 weeks, 3 months approximating a season; each month has exactly 26 weekdays plus Sundays; days and dates agree from year to year; holidays are fixed on their regular days and dates; and every year, half-year and quarter-year begins with a Sunday and ends with a Saturday. This gives us a year of 364 days, a number divisible by 2, 4, 7, 13, 14, 26, 28, 52, 91 and 182—ten different ways of division to simplify operational and statistical procedures. With no other number between 0 and 364 is this possible. Here is convincing proof that The World Calendar is simple arithmetic for maximum efficiency. Only six months between 28 February and 1 September are affected; the remaining months agree with the present calendar.

It is significant to mention that, by placing the 365th day—*Worldsday*—at the end of the year, on its specific date W December (signifying a world holiday) or if preferred 31 December, it continues the spirit of good will, of friendship, of peace, sparked 6 days earlier by Christmas. The *Leapyear Day* in the middle of the year on its specific date W June, or if preferred 31 June, is another world holiday. Both these new stabilizing days are to be universally observed as *world holidays*, days on which all nations, races and peoples come together in peace, harmony and cooperation.

These holidays have no actual business connection. The possible requirement of time-and-a-half for essential work is more than compensated for by the incalculable advantages gained from the perpetual, comparable World Calendar.

Benefits To Be Had

How does this sensible, simple calendar benefit us?

Walter Mitchell, Jr., former managing director of your Controllars Institute and a widely known consultant in management-planning and economic-analysis, reports in a recent study that *several hundred millions* of dollars will be saved annually, in business firms in the United States alone, by the adoption of The World Calendar.

The Lockheed Aircraft Company pays all its employees—from the chairman of the board to sweepers in the factory—on a weekly basis, because this simplifies the

payroll. However, it reports corporation earnings and taxes on a flat calendar year. The Company estimates that it costs about \$100,000 each year to make the computations and adjustments necessary in its records. Executives believe that a calendar like The World Calendar of exactly 52 weeks would enable them to eliminate as much as one-quarter of this cost.

In Cleveland, Ohio, the Lincoln Electric Company declared that production scheduling was done in detail at least 90 days ahead, with six persons involved in the work on a full-time basis. It was estimated that the work would be at least 2 or 3 per cent less expensive with a stabilized calendar.

In 1950, Dr. John M. Firestone of the Department of Economics, College of the City of New York, made a survey of the effects of the present calendar on American business. Questionnaires were sent to members of the Controllors Institute of America listing twelve difficulties in scheduling sales or production reported by business men. Replies were received from 538 controllers working for companies with a total capitalization of more than 20 billion dollars. More than 86 per cent indicated calendar difficulties and expense. Of the 466 industrialists, 437 or 93.8 per cent stated that a stabilized calendar would alleviate such difficulties. The great majority of replies received favored the 12-month equal-quarter plan—The World Calendar.

Another advantage of the new calendar of 52 weeks to the business world is the elimination of that awkward day of a 53d week, the so-called "week-unit procedure" so annoying in the payment of taxes.

Think what The World Calendar will mean to employees in terms of greater income, greater savings and greater security! Think, too, what it will mean to management and stockholders by eliminating the present wastefulness of valuable time, effort, money and material! Think also what it will mean to your group in analyzing reports, assembling annual, quarterly, monthly, weekly and daily accounts!

For the first time all the various time-periods coordinate. Each is given its equal right, its appropriate function without interference, domination or subordination. It does not matter whether the various departments in a business firm pay by the day, the week, bi-monthly, monthly or quarterly periods. They all agree at the end of every quarter-year.

With The World Calendar in operation, annual comparisons for budgeting and all kinds of statistics will make for greater accuracy. Holidays will be observed on regular days and dates; transportation schedules—passenger and freight—will be more efficiently planned; schools and universities will profit inasmuch as the annual curriculum can be fixed; advertising will be arranged more accurately with the weekday and month-date known; checking and rechecking of days and dates will no longer be necessary.

Birthdays and other individual and national anniversaries will be observed always on the *day* of the event as well as the date. Those who were born on the dates 31 March, 31 May, 31 August, which have been transferred to the new dates 29 and 30 February, and 31 April, will observe their birthdays as leap-year children do, on the day before in the same month.

Agreeing days and dates are of vital importance to historians, research workers, and corporations, as they offer a more accurate analysis, survey and charting of events. It has been said that the dimension of Time is encircled by twin oceans—the past and the future—which ceaselessly move around mankind. With the perpetual comparable civil World Calendar as man's reliable compass, the past will be better gauged, the present better analyzed, and the trend of the future more accurately anticipated.

Adoption

Can The World Calendar be adopted at any time?

The best and most appropriate time to make the transition from the Gregorian to The World Calendar is in those years when in the Gregorian 1 January will fall on Sunday, the first day of the week. This coincidental date occurred in 1933, 1939, 1950 and will occur again in 1956 and 1961. The most feasible target date now is Sunday, 1 January 1961, when the present Gregorian can glide into The World Calendar.

The conversion of dates entailed is surprisingly small: From 1 January through 28 February the two calendars are the same. Then, the two new dates in February cause a shift of two dates in March, and with the loss of 31 March in The World Calendar the shift of dates is only one in April. This difference of one or two dates continues in the months until 1 September, and from that date on until the following 28 February both the calendars agree.

Never could a calendar be introduced with less adjustments, less difficulties. As Captain J. F. Hellweg, retired chief of the United States Naval Observatory, wrote: It could be adopted with "a minimum of upheaval and disturbance and a maximum of benefits to mankind."

Obstacles to Calendar Reform

What are the obstacles to calendar reform?

Reforms throughout the ages were never effected without opposition—a seemingly invariable law of human nature by which reforms are tested for their value and purpose.

The obstacles to calendar reform are twofold—first, traditionally religious sectarianism, and second, apathy and indifference.

The sectarians object to the insertion of the two days between two weeks on the assumption that this will break the allegedly uninterrupted sequence of the seven-day week. This interpretation is solely sectarian, a questionable concept and attitude of certain religious groups which consider the calendar from their hereditary belief rather than from a world point of view.

The civil calendar is a world-wide international subject apart from local, individual or group monopoly. Of course, all persons and groups have the right to make their opinions known, but no person or group is entitled to pre-empt the right of the majority.

It is well known, of course, that the United States of America is a nation composed of various geographical sections—Eastern, Northern, Central, Southern and Western States—all vitally essential to the welfare and progress of the entire country.

Suppose, however, there were a few citizens who claimed most vigorously and emphatically that since the original thirteen Eastern States founded the nation, they have a traditional preference and have special weight in determining the national policy. Were such an idea to be upheld, the nation would very soon fall apart and become disunited.

The sectarian opposition to The World Calendar exerts this influence. It urges governments and peoples to do nothing that would interfere with its special religious belief in the unbroken continuity of the seven-day week, insisting that it be upheld to the detriment of the other time-units—the day, month, season and year. Emphasis on one time-unit, such as the unbroken continuity of the seven-day week, prevents the calendar from being a complete and well-coordinated time-system.

The World Calendar recognizes no special time-unit, all are given equal consideration. It is this sense of equality and coordination that makes this plan uniquely superior. In usage, purpose and possession the new civil calendar belongs to the whole world, not to any special group.

The other obstacle is apathy and indifference.

In a recently published book on Egypt I read, "Egypt was overcome by the same malady that afflicted all the old high civilizations. This was the malady of indifference, the price that had to be paid for the wisdom which they achieved."

If we are apathetic and indifferent to The World Calendar, thinking that what was good enough for our forefathers is good enough for us, we shall continue to impoverish ourselves and withhold a better calendar from our fellow men. Let us guard against the "malady of indifference."

To illustrate the adverse effect of sectarianism and indifference, I cite a phase of Egyptian history.

When Ptolemy III proposed an additional day, which he dedicated to the "Good Doing Gods," to be inserted at the end of every fourth year so as to keep the calendar in step with the seasons from which the calendar was wandering, he met with stubborn opposition. The ancient priesthood was unwilling to forego its prerogative to insert an extra day and the people, too, were apprehensive of change. These conditions together with indifference caused the defeat of the extra day. Two hundred years later Julius Caesar gave to the world that extra day, the leap-year day of the present Gregorian calendar.

Has not civilization in its calendar-making advanced in the past twenty centuries? Is The World Calendar with its significant and inspiring *Worldsday* and *Leapyear Day* to be likewise defeated because of stubborn resistance by certain religious sectarians, by the peoples' hesitancy to change and by general indifference?

I just cannot believe it. It is inconceivable that in our present age we should place ourselves in the same category with ancient Egypt.

Action To Be Taken

What can we as citizens do to advance The World Calendar?

It is most fortunate for our civilization that we have the United Nations—the

impartial, international forum before which nations can present their problems for solution.

In October 1953, the Government of India asked that The World Calendar be placed before the United Nations Economic and Social Council. This was done and a year ago it was considered at Geneva. The resolution then adopted requested that a letter be sent by the Secretary-General to ascertain the opinions of all governments. The subject came before ECOSOC last May, but action was postponed by India inasmuch as insufficient replies had been received. The Secretary-General was then asked to communicate again with the governments which had not as yet replied. This spring in April, calendar reform will come before ECOSOC and the governments will determine whether the United Nations will set up a *study committee* to recommend the best civil calendar for approval and adoption.

To accomplish this, the immediate and urgent need is for international and national organizations, as well as for individuals, to express their opinions to their respective governments. Silent inactive approval is *not* sufficient.

In this connection, I draw your attention to the resolutions passed by the Pittsburgh and Seattle Controls of the Controllars Institute which endorsed The World Calendar as a means "to meet more adequately the requirements of the modern world, particularly in facilitating simpler and more accurate procedures in management planning in accounting."

There is also the action in 1947 of the Controllars' Congress of the National Retail Dry Goods Association endorsing The World Calendar. This was followed by the National Retail Dry Goods Association's endorsement in January 1955.

I should also mention the endorsement last June of the United States Junior Chamber of Commerce.

This leads me to make an earnest appeal to the General Accounting Committee of the New York City Control of the Controllars Institute of America to give this subject, on which I have the pleasure of speaking to you this evening, your serious attention and to place the matter before your Institute for favorable action and resolution to be sent to the State Department of the United States, to Congress and to the United Nations, requesting *impersonal unbiased study* by the United Nations. This is in line with a statement made by a former Secretary of the Treasury: "The question is one which can be disposed of only by international action"—to which I would add, comprehensive international study to precede international action.

Just as the adoption of Standard Time in 1884 brought order into our clock-time, so the adoption of The World Calendar in 1961 can bring order and stability into our calendar-time.

An editorial in *The New York Times* stated: "Time that 'takes survey of all the world' should itself be one and the same for all the world."

Isn't this worth working for—a better calendar for a better world?

OBITUARY NOTES

DR. MEGHNAD N. SAHA. It is with great regret that the *Journal* includes a stop-press announcement of the death of Professor Meghnad N. Saha, D.sc., F.R.S., who just a month earlier had accepted his election as a Vice President of the International World Calendar Association. Dr. Saha died of a heart attack in New Delhi, at the age of 62.

Dr. Saha was Director of the Indian Association for the Cultivation of Science, Founder and Hon. Director of the Institute of Nuclear Physics, in Calcutta, and President of the Astronomical and Astrophysical Society of India. His international reputation as a scientist dates from his *Theory of Thermal Ionization*, published in 1920, which marked a new era in astrophysics.

Elected a member of the First National Parliament of India, as an Independent from Northwest Calcutta, Dr. Saha was an official representative of India on various occasions at international conferences. He was appointed Chairman of the Committee on Calendar Reform set up in India in 1953, at the direction of Prime Minister Nehru and his Minister of Education, Maulana Abul Kalam Azad, by the India Council of Scientific and Industrial Research, the committee consisting of seven prominent scientists of the country.

Subsequently, after the formation of the Committee on Calendar Reform of India. The World Calendar was proposed by that country as an item for consideration by the United Nations Economic and Social Council. In 1954 at Geneva Dr. Saha, representing the Indian Council of World Affairs, spoke on behalf of The World Calendar to the Committee on Non-Governmental Organizations of ECOSOC. He stated: "I have been a supporter of The World Calendar Plan, as presented by The World Calendar Association, for over two decades, both as an astronomer and as a social worker. . . ."

With Professor Saha's death the cause of World Calendar Reform has lost one of its staunch and active supporters.

DR. WILLIAM STARR MYERS, Professor Emeritus of Politics at Princeton University, died 27 January at the age of 78.

A friend of President Woodrow Wilson and President Herbert Hoover, Dr. Myers was known as one of President Wilson's "preceptor-guys," a designation coined when Mr. Wilson, as president of Princeton, organized the preceptor system of instruction. Mr. Wilson invited Dr. Myers to Princeton in 1906, and he remained on the faculty until his retirement in 1943.

Long-time friends of Miss Achelis, Dr. and Mrs. Myers were staying at the Lake Placid Club at the time when she received the idea to work for The World Calendar, and Dr. Myers was the friend to whom she first confided her plan. He gave her unhesitating approval and encouragement and she often turned to him for advice and support. A member of the United States Advisory Committee, he was actually one of the first members to join The World Calendar Association.

PROFESSOR ALBERTO CUMMING, Chile's Ambassador to the Holy See for the last three years, died in Rome on 2 January 1956, at the age of 74. The Holy Father, on being told of his approaching death, sent Ambassador Cumming his special blessing.

Dr. Cumming, formerly Professor of International Law at Catholic University in Santiago, Chile, had been one of the original members of the Chilean Committee for The World Calendar, formed in 1934, and had been its chairman since 1938. Chile, it will be remembered, in 1937 initiated the efforts to obtain adoption of The World Calendar through the League of Nations.

FEDERAL FORESTERS FAVOR THE WORLD CALENDAR

By Dr. James L. C. Ford

When President Eisenhower visited Missoula, Montana, to dedicate the new million-dollar aerial fire center there, he praised highly the work of the U.S. Forest Service and focused national attention on its activities. It is of special interest, therefore, to note in the following article the support and interest of top forest service officials in The World Calendar.

DISTINCT advantages are offered by The World Calendar for the complicated supervision of the 24,705,000 acres of towering forests, mountain lakes, and rushing streams of the U. S. Forest Service's Region One, in the opinion of four executives of the federal agency's headquarters in Missoula, Montana.

Located in the gray-stone, three-story building at Pine and Pattee streets in downtown Missoula, the men in charge of auditing, accounting, procurement, and research for the Forest Service's largest district pointed out one reason after another why The World Calendar would benefit their work as well as similar operations in other government agencies.

Adoption of The World Calendar would afford material benefits for the Division of Procurement and Supply, its chief, Lloyd Noel, Regional Supply Officer, told me, waving his black cigarette holder emphatically. Noel, sitting against a miniature diorama showing a string of pack mules on a high mountain trail, described how his knowledge of The World

Calendar went back to college days at Montana State University when he was a member of an economics class which spent a week studying it.

"A day here or a day there makes no real difference," Noel pointed out, a smile on his lean face, "to our operations. It's the periods or seasons of the year which affect us when it comes to procurement. While we do get out contracts for perishable items on a monthly basis of 30 days (pricewise we won't bid for supplies on the markets as they are today for over 30 days), our buying for our work season is based on preparing for the five months of May to September inclusive. In those months we move about 90 per cent of the supplies we use.

"From about the middle of November to the first of March, all our merchandise moves into warehouses, the big bulk of our shipments being sent in May into the field. We do a lot of packaging and assembling of items; most of our stuff goes out in units," and Noel smiled again, shaking his close-curved iron gray head in wry amusement at the housekeeping job he had. "Annually we handle \$1,-

700,000 in warehouse stocks. We set up our budget on that basis."

Holidays in the middle of the week upset Forest Service operations, Noel stressed as did several others seen later. He pointed out that The World Calendar did place New Year's Day on Sunday preceded by the new world holiday "Worldsday" and Christmas in a useful position on Monday, as well as Labor Day; that Armistice Day would not interfere by breaking up the week. But other holidays were not located so efficiently—Washington's Birthday fell on Wednesday, Memorial Day on Thursday, Fourth of July on Wednesday, and Thanksgiving on Thursday. (All of these could be stabilized on Mondays in the months after the stable calendar is put into operation.)

"Objection might be raised to the Saturday location for Armistice Day, however, by employees who saw that as a day-off which they missed.

"The perpetual calendar aspect of The World Calendar would materially help us," Noel emphasized. "Our reports would always be due on the same day and we could schedule them from year to year accordingly. There also would be considerable improvement in planning our other work."

In the Northern Rocky Mountain Range and Experiment Station, Paul Kemp, forest mensurationist, pointed out a great advantage which The World Calendar offered the Forest Service. Nodding his head emphatically over a gay plaid tie, Kemp pointed out how it would give an exact relationship between the fiscal year's end on Saturday, 30 June, and the two-week basis of Forest Service operations.

"Certainly this has lots of merit in our case," Kemp said vigorously, "especially the way in which fiscal and calendar years would coincide in beginning and ending dates. We pay our employees every two weeks, therefore the way The World Calendar is divided into 26 periods of two weeks each would fit our pay-roll planning admirably. For statistical comparisons in our research, there's not as much difference for we don't compare by quarters, although I can see how much that would help in a merchandising business with the equal quarters and perpetual calendar. But we measure forest or tree growth and that growth bridges quarters and actually is figured over a period of several years.

"Surely The World Calendar brings order out of the present chaos in the calendar in that it sets definite patterns. One's own personal records would be more orderly, especially in regard to birthdays and anniversaries. It's as perfect as man can devise. There are no precise reasons why holidays are set on certain dates. Such an improvement as The World Calendar should have been adopted long ago—our present calendar is a relic of horse-and-buggy days."

Another department of the Forest Service constantly concerned with finances and accounts is the Division of Fiscal Control which was headed for many years by LeVaughn Beaman as Regional Fiscal Agent, a gray-haired stocky man of medium height.

"The main advantage of the system to us," Mr. Beaman explained, "would be in handling of the biweekly payroll, in keeping track of personal services such as leaves, social security, and employee tax records. Use of The World Calendar

would mean, for example, that our January pay rolls always would fall on Saturday the 14th and the 28th. Thus, each month we would have fixed dates which would not change from year to year—a great convenience.

“As to holidays, the loss of Armistice Day as a holiday (for we work a five-day week) would be compensated by the gain of World’sday. But how could we take care of World’sday, unless it became a non-pay day—otherwise, it would be a nuisance as an odd day. But as The World Calendar planners themselves suggest, ‘Holidays with definite month-dates can also be placed on the week-end if desired.’

“The equal quarters also would help us in relation to reports for both Social Security and withholding tax,” the financial controller pointed out. “Also the way in which the pay periods work out exactly so that there are no days left over or under, but precisely 26 periods of two weeks each, would be a decided help in figuring annual leaves within the confines of a single calendar and fiscal year. With the present calendar we have 27 such biweekly periods in some years. The World Calendar would eliminate such irregularities.”

Across the hall, Ralph Peterson, his blond hair and fair complexion testifying to his Scandinavian heritage, fingered his blue-and-yellow-striped tie as he em-

phasized his chief’s point and added several of his own.

“What an advantage it would be to be able to plan definitely that the first and last days of each quarter would always come on a specific day of the week,” Peterson stressed. “You can schedule the work in terms of a definite, always dependable plan. The obligation reports from individual forests and the region could be mailed to Washington regularly on the same date every month. The same would be true for budget and apportionment reports which are due on a quarterly basis. And it would certainly help us to be able to begin each quarter on a Sunday.

“There is no question but that we could organize our work much better than on the present system, when we are constantly having to refer to the calendar. We could set up one definite schedule for our reports and it would become a permanent part of our thinking and planning.”

As with the Forest Service, so with other government agencies under similar obligations for reports, record-keeping, and fiscal or procurement systems—The World Calendar affords a considerable number of advantages over the present haphazard and constantly varying calendar. This is the testimony of four responsible government officers of long training and responsibility.



THE CLOCK OF THE CENTURIES

By Lewis S. Palen

After graduation from Cornell University (1900), Mr. Palen took up appointment in the Chinese Imperial Maritime Customs. In 1907 he was sent to open to international commerce the then little known, now too well known, port of Antung at the mouth of the Yalu River. For his work there he was raised by special imperial edict to the rank of a Chinese Civil Mandarin of the Third Degree. He returned from China in 1921 to serve in the State Department as a specialist on Manchurian and Chinese Customs questions. After 1922 he devoted himself to editing and writing. He is the author of some dozen books. At present he resides in Geneva, Switzerland, where he is assistant editor of The Eastern Jeweller and Watchmaker. This article is abridged from its All-Asia and International Issues, Nos. 2 and 4, 1955.

Although our best-known instruments for the accurate measure of time, which we know familiarly as clocks and watches, are but toys of only the last few centuries, man has for millenniums been searching for a yardstick that would serve him to mark the seasons for the sowing and reaping of his crops and, even earlier, for the provisioning of his fuel, his dried and frozen meats and his furs for those cold, cruel months that drove him deeper into his primitive cave.

Although at the beginning, he may have only hacked notches in wood or stone to mark the number of the brilliant moons that gave him the light at night between the melting of the snows and the coming of the autumn frosts, to be followed by his offspring in later millenniums with more sophisticated means, he was always striving to achieve a measure of time that has never ceased to pose for him an apparently unsolvable problem, because of the erratic performances of those heavenly bodies, the sun and the moon, by which he has sought to fix accurately the spaces in time. Of what may have been his success in those earliest aeons we have no positive knowledge; but with the coming of recorded history we do know many of the interesting developments that have taken place in the building up of this structure which we accept so nonchalantly as the calendar today.

AS seasons were always the dominating element in the lives of prehistoric and early men, the first means of measuring time's duration centered around these now familiar quarters of the year. Then, through the centuries, the days and festivals started to claim attention of the ever-growing mind of civilized man.

To correlate all the facts which had become common knowledge through these long centuries became more and more the task of the newly developed class known as scholars and learned men. All their efforts were marked by continuous searching for some way of putting down a record of the passing of these seasons, moons and days that would be unchanging and constantly reliable.

We find in history's earliest records that the lunar calendar of different peoples followed closely the Oriental pattern of an occasional 13th month, while Egypt had for a long time one of 12 equal months of 30 days each, to which five days were added at the end of every year.

Caesar, the great reformer who made the Roman calendar the standard of the Western world, called to his aid a Greek astronomer, who took from the Egyptians the basic idea of the twelve months as we know them with an extra day in every fourth or leap year. This became the Julian calendar of $365\frac{1}{4}$ days and continued to be observed until it was re-adjusted in 1582 by Pope Gregory XIII.

In the meantime the Emperor Constantine took a hand in some further adjustments by his introduction for the first time of a seven-day-week period, which had come down from more ancient eras

farther back than any existing reliable record. Basing his revisions upon these elements in 321 A.D., he changed the stable Roman calendar into a variable system in which every year was different.

After this rather mussing up of the yardstick of time and the erroneous accumulations in the Julian calendar of $365\frac{1}{4}$ days, Pope Gregory XIII undertook and accomplished the revision which is now in general use.

"Outside the strictly Roman Catholic countries, there were long delays in recognizing the scientific advantages of Gregory's proposals. Protestant Germany and Denmark adopted the new calendar in 1700; Great Britain and the American colonies in 1752, Sweden in 1753, Japan in 1873, China in 1912. Russia and the Eastern Orthodox countries were tardiest of all."

Orthodox Russians still observe Christmas and New Year's 13 days after our Western festivals.

Through all the changes that were decreed by the Russian government in the 18th, 19th and early 20th century, the Church still clung to the Julian calendar, and farmers and peasants continued to work and plan according to the seasons, months and weeks as their forefathers had. "From 1940 onward, official Russia returned to the Gregorian calendar with its seven-day week, using Sunday as a rest-day. By this latest action the government returned to the idea of Lenin, and Russia is once more using the same calendar as 'all the civilized countries of the world.'"

In addition to the conglomeration of ideas in the Russian calendar there still remain many other "watches of the cen-

ture" in different lands, chief of which are the Jewish and Moslem ones.

"The principal features of the Jewish calendar as it exists today are: it reckons the years from 3761 B.C. (7 October at 8:11 o'clock), a conventional starting point representing the Creation; it regards the day as beginning at sunset, which for convenience is supposed to be 6 p.m., Standard Time (but in Jerusalem it is Jerusalem time, 2 hours and 21 minutes off Greenwich); the New Year comes in the autumn, either in late September or early October; the years consist of 12 months of alternating 29 and 30 days, with a 13th month inserted seven times in every 19 years; the Sabbath is observed at the end of the week, starting at sunset on Friday and continuing until sunset on Saturday, when a new week begins; the names of the months are of Mesopotamian origin and some of them perpetuate pagan deities."

In the second large group "three hundred million Mohammedans—concentrated in a dozen countries of the Middle East and adjacent parts of Asia and Africa—still use a primitive lunar calendar, that was inaugurated in Arabia several years after the Prophet's death in 632 A.D."

It is in India that their calendar has probably come into greatest conflict with those numerous others which have developed in the great sub-continent. And this brings us abruptly face to face with the most important subject of calendar reform. Through all the efforts from earliest times down to the present century there has been the same object in view by all the reformers who have attempted, successfully or otherwise, to work out some system that would be

astronomically correct and universally acceptable to all the divergent religious, economic and administrative interests.

As a result of these efforts a new calendar organization was formed in the United States in 1930 under the name of "The World Calendar Association." Through these two and a half decades the Association has published its *Journal of Calendar Reform*, with its ever-increasing insistence not only upon the need for a more nearly perfect working calendar than any single one hitherto developed but also upon the reality of accomplishment in the construction of what the Association has christened as "The World Calendar." It has likewise spread a great network of organization throughout all the countries of the world. Its Affiliates and National Organizations are now to be found in 41 different lands, with many leading astronomers, scientists, administrators and government officials supporting its campaign for adoption. The several quotations in this article have been taken from the June and September, 1954, issues of its *Journal*.

Before presenting The World Calendar itself and a part of the arguments advanced in its favor, it is of consummate interest to trace rapidly some of the outstanding efforts in the long struggle for reform. As far back as in 1834 modern calendar reform was initiated by an Italian priest, Abbé Marco Mastrofini. A recent Catholic writer points out: "The only detail in which he did not anticipate proposals like the modern World Calendar was in regularizing the lengths of the months and making the quarters equal. But these are, after all, lesser details. Mastrofini originated the basic idea of all modern reform, the stabilizing

days. For this momentous suggestion he has not been adequately honored by the world."

After unsuccessful efforts by French ecclesiastics in the 'eighties of last century there was finally, in 1887, a new "Astronomical Society of France" launched under the presidency of the French astronomer Camille Flammarion. But "the real impetus for an improved calendar did not come from either priests or astronomers, but from the world's leading business organization, the International Chamber of Commerce. This influential institution had been interested in the subject from its inception. In 1910, 1912 and 1914 (at its biennial conventions) it urged calendar reform in three successive resolutions, each one stronger than its predecessor. In 1912 it sent an inquiry to Rome, asking for a clarification of the Vatican's attitude, and received the following reply from the Papal Secretary of State: 'The Holy See declared that it made no objection, but invited the civil powers to enter into an accord on the reform of the calendar, after which it would willingly grant its collaboration in so far as the matter affected religious feasts.' This reply was most significant, in that it clearly separated the civil calendar from the religious. The former was the responsibility of governments; the latter that of the churches."

Following other communal action of nearly a decade "science, government and business joined hands in the next stage of progress. The League of Nations was established in 1920 and was approached on the matter of an improved calendar in 1923. The Swiss government, the International Chamber of Commerce and the International Astronomical

Union all felt that calendar reform should have a place on the permanent agenda of the new international organization. Their suggestion was approved at Geneva, and the subject was allocated to the League's Section on Communications and Transit. . . . The special committee continued its studies throughout 1924, 1925 and 1926, when it submitted its final report."

Later, in 1928 and 1929, joint resolutions were introduced in the House of Representatives, Washington, requesting the President to propose the calling of an international conference on calendar reform, which led to the League of Nations organizing the first international calendar conference ever recorded in history. This was held in Geneva, 12 October 1931, and lasted a week. Through various vicissitudes, always sponsored and pressed on by The World Calendar Association, the movement finally found a powerful protagonist in the government of India. There was more than ample reason and justification for this government to throw its aid into the reform movement, inasmuch as it had within its own national household such a conglomerate mixture of Moslem, Hindu and various other calendars that it was required to print many of its official documents in three different texts, in order to make these conform to the dates of millions of its subjects in these different categories. And so it was that the distinguished Professor Meghnad Saha, F.R.S., Member of the House of People of India (Parliament), Honorary Director of the Institute of Nuclear Physics, Calcutta, and representative of the Indian Council of World Affairs, on 7 July 1954, spoke in favor of the calendar reform resolution introduced into the Geneva

session of the Economic and Social Council by India and seconded by Yugoslavia, calling on all governments to present their views on calendar reform to the Secretary-General of the United Nations for subsequent consideration by the Council.

Professor Saha made a strong plea for the adoption of The World Calendar plan, as presented by The World Calendar Association, stating that he had personally been a supporter of this for over two decades both as an astronomer and as a social worker.

He was followed by Miss Achelis, whose opening remarks expressed the regret that Sir Harold Spencer Jones, the Astronomer Royal of Great Britain, was unable to be present and had asked her

to put before the committee a letter, in which he used the following phrase to describe The World Calendar: "It has the great merits of simplicity and of involving the minimum changes in the present calendar." Miss Achelis added "It was a compatriot of Sir Harold Spencer Jones and a world-figure in business affairs—the late Lord Desborough—who was for many years an ardent advocate of calendar reform. Lord Desborough was President of the International Chamber of Commerce that took the initiative at its Congress in 1910."

The citation of these three eminent men is an indication of the enthusiastic support accorded this change by men of science and distinction the world over.



EDITORIAL PARAGRAPHS

The new plan seems to have a very good chance. All conditions for success seem to be there. Let us hope that the perpetual World Calendar will be adopted, a promise of better understanding among all mankind.—*Courrier Francais du Dimanche, Bordeaux.*

Of many suggestions for calendar revision offered through the years, only one, The World Calendar, seems to have any chance of adoption. It would have a great many advantages over the system now in use.—*DeKuniak (Fla.) Times.*

The world's governments are considering their views on the introduction of a "World Calendar" as a universal system of time measurement to take the place of all existing calendars. The basic principle of the proposed "World Calendar" is to iron out all the irregularities of the existing Gregorian calendar.—*Egyptian Gazette, Cairo.*

Adoption of the new calendar is merely a question of time. The present chaotic world situation is probably a major force in keeping it on the shelf.—*Wooster (O.) Record.*

Three mainstays of civilization are the clock, the compass and the calendar. Since both clock and compass have long since been stabilized, it seems time our calendar kept pace, instead of remaining a patch of shifting sands and jumping beans.—*Toronto Globe and Mail.*

The United Nations is the international body through whose leadership The World Calendar may be given world approval. To this end, it is to be hoped that member nations will approve the revision and that the necessary legislative steps will be taken by them.—*Ultima Hora, Maracay, Venezuela.*

At the United Nations, the plan for a World Calendar would eliminate all the confusion of the present system and make it possible to figure the day-of-the-week for any future date in a few seconds. The cal-

endar has been changed before, therefore it is neither sacred nor inviolate. Certainly our current system needs some kind of betterment.—*News, Gardner, Mass.*

It begins to look as though, at long last, the world may actually be going to get a rational calendar. If The World Calendar goes through, as now seems at least possible, a devoted group in Australia will be able to claim a share of the credit. They are headed by Professor A. D. Ross and Mr. John K. Lavett.—*The Sun, Sydney.*

Every bookkeeper and auditor in the land will be aided by the new calendar because it equalizes months and quarters.—*Waynesboro (Pa.) Record Herald.*

We live in standardized times. We might as well have standardized days. The World Calendar would give us regularity. It would enable us to make forecasts based on previous experience.—*Natal Mercury, S. Africa.*

Certainly the calendar needs some kind of betterment. The plan proposed at the U. N. will make life simpler by doing away with present complications. The calendar has been changed before: it is neither sacred nor inviolate.—*News, Sault Ste. Marie, Mich.*

The plan being studied by the United Nations seems to comprise all the qualities which must be required of a good calendar: it is scientific, simple, perpetual and easily accepted by all countries.—*L'Eclaireur Méridional, Montpellier, France.*

Our present calendar evolved in a haphazard way, adding on here, taking off there, rubbing out, filling in—and really doesn't make too much sense.—*Telegram, Worcester, Mass.*

When the Economic and Social Council of the U. N. finds opportunity to consider reports from member countries, it will recommend world-wide adoption of The World Calendar.—*West Australian, Perth.*

FROM THE MAIL BAG

Improvement in our calendar system is necessary, and the proposed World Calendar is the best for universal use.—A. T. Dharam Dass, Mgr., Saraya Distillery, Sadarnagar, Uttar Pradesh, India.

It seems obvious to me that The World Calendar is a step toward world unity.—James Willis, Science Teacher, Bloomington, Ind.

I am following very closely the progress of your efforts, which I applaud, and I wish you the greatest success.—Abbé Jean Van Agt, Rector of Saint-Philibert, Lille, France.

Your booklet on The World Calendar is enlightening, complete and instructive. Your work in that field is going forward in a stable way. I wish for its prompt and great success.—Nancy Lansdale, New York City.

I am interested in calendar reform and am now and then speaking to various groups on this subject. Recently, after one address to the Kobe Rotary Club, some forty of the members of the Club asked for more material for further study. The substance of my talk and a copy of The World Calendar were printed in the Rotary Club bulletin, in Japanese.—Roy Smith, Kobe University, Japan.

Keep plugging. We will make it some day.—Andrew Sinamark, M.D., Morsman Clinic, Hibbing, Minn.

I am keenly interested in this idea and have been for years.—Donald L. Derrom, Engineer, Mexico, D. F.

It's high time we brought our old-fashioned calendar up to date.—J. M. Corbridge, Science Teacher, Garden City, N. Y.

I completely agree with the solution proposed by your Association for calendar reform—12 months of equal quarters—which is far superior to a 13 months calendar, for by uniforming the present calendar it

ought to tally easier with those of all the peoples of the universe who should adopt it as an unavoidable and necessary reform.—José Fortunado Pita de Macedo, Lisbon.

I read my copy of the *Journal* regularly and appreciate it very much.—J. F. Ringer, Controller, Park College, Parkville, Mo.

I shall be most happy to do what I can in a movement which I believe is significant in the growth of civilization.—Dr. Amir Ali, Osmania Univ., Hyderabad, India.

Happy New Year, and wishing it were a Happy World Calendar (Adopted). Forever in favor of The World Calendar.—Frank Sheldon, Polytechnic Institute of Puerto Rico, San German.

In the very near future we hope to achieve good results for The World Calendar in Pakistan. I had discussions with some businessmen and they have assured me of their support.—Sharaf Faridi, Karachi.

Adoption of The World Calendar meets with my enthusiastic approval, and I plan to speak about it every chance I get.—E. H. Dahlke, Librarian, Morrilton, Ark.

Best wishes for The World Calendar Association.—Jorge de la Cuadra, Librarian, Scientific Society of Chile, Santiago.

Your program is a great step toward world unity.—C. E. Norris, Harrisburg, Pa.

I believe that when the man in the street becomes enlightened he will see that calendar reform is undertaken with all possible speed.—J. Arthur Rodwell, Consulting Engineer, Durham City, England.

Hope you like my consistent support of your efforts, which should be crowned with 1961 success!—Chas. Clay, Napanee, Ont.

Let's do something about putting it across in Brazil.—H. Saville Dodd, Sao Paulo.

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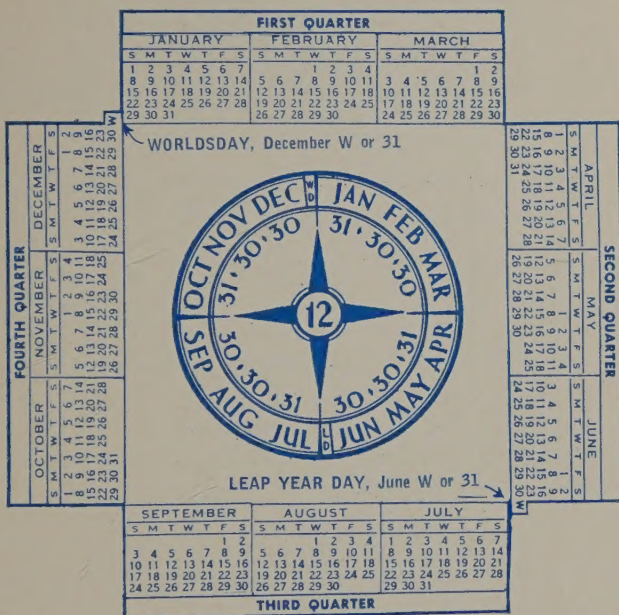
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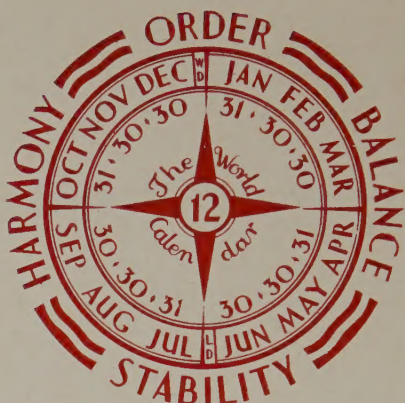
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 HARMONY BALANCE ORDER STABILITY
 NOBLE QUALITIES FOR THE
 ANNUAL ROUNDS OF MAN'S ACTIVITIES
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THE WORLD CALENDAR FOR THE WHOLE WORLD

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Although this is the final issue of the *Journal of Calendar Reform*, published by the Incorporated Association in New York, the

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will be issuing from its headquarters in Ottawa, Canada, periodical News Bulletins and other material, from its provisional address, P. O. Box 20, Besserer Street, Ottawa, Canada, pending the establishment of a permanent one. If you wish to be on the mailing list, please send in your name and address.

The International World Calendar Association will gratefully receive contributions for furthering its work.



Journal of calendar reform

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